



# **STIC Search Report**

## **EIC 2100**

**STIC Database Tracking Number: 95158**

**TO: Thu Ha Nguyen**

**Location:**

**Art Unit : 2155**

**Tuesday, June 03, 2003**

**Case Serial Number: 09/502377**

**From: Terese Esterheld**

**Location: EIC 2100**

**PK2-4B30**

**Phone: 308-7795**

**[Terese.esterheld@uspto.gov](mailto:Terese.esterheld@uspto.gov)**

### **Search Notes**

Dear Examiner Nguyen,

Attached, please find the results of your search request for application 09/502377. I have concentrated on finding information on Clients request the capture of a program, encoded, transmitted at a different time.

I have marked articles of possible interest. Please look over the complete packet as articles that have not been marked may be of value to you.

Thank you for coming to EIC 2100.

Terese Esterheld

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COMPUTERS

protocol

An agreed set of **standards** for the transfer of data between different devices. They cover transmission speed, format of data, and the signals required to synchronize the transfer. See also interface.

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**We found 76 dictionaries with English definitions that include the word *protocol*:**

*Tip: Click on the first link on a line below to go directly to a page where "protocol" is defined.*

➔ **General** (21 matching dictionaries)

1. [protocol](#) : Merriam-Webster's Online Dictionary, 10th Edition [[home](#), [info](#)]
2. [protocol](#) : Encarta® World English Dictionary, North American Edition [[home](#), [info](#)]
3. [protocol](#) : Cambridge International Dictionary of English [[home](#), [info](#)]
4. [protocol](#) : The Wordsmyth English Dictionary-Thesaurus [[home](#), [info](#)]
5. [protocol](#) : The American Heritage® Dictionary of the English Language [[home](#), [info](#)]
6. [protocol](#) : Infoplease Dictionary [[home](#), [info](#)]
7. [protocol](#) : Dictionary.com [[home](#), [info](#)]
8. [protocol](#) : UltraLingua English Dictionary [[home](#), [info](#)]
9. [protocol](#) : Cambridge Dictionary of American English [[home](#), [info](#)]
10. [Protocol \(object-oriented programming\)](#), [Protocol](#) : Wikipedia, the Free Encyclopedia [[home](#), [info](#)]
11. [Protocol](#) : Online Plain Text English Dictionary [[home](#), [info](#)]
12. [protocol](#) : Webster's Revised Unabridged, 1913 Edition [[home](#), [info](#)]
13. [protocol](#) : Rhymezone [[home](#), [info](#)]
14. [protocol](#), [protocol \(het\)](#) : AllWords.com Multi-Lingual Dictionary [[home](#), [info](#)]
15. [protocol](#) : Webster's 1828 Dictionary [[home](#), [info](#)]
16. [protocol](#) : Columbia Encyclopedia, Six Edition [[home](#), [info](#)]
17. [protocol](#) : Hutchinson's Dictionary of Difficult Words [[home](#), [info](#)]
18. [PROTOCOL](#) : 1911 edition of the Encyclopedia Britannica [[home](#), [info](#)]
19. [protocol](#) : WordNet 1.7 Vocabulary Helper [[home](#), [info](#)]

Quick definitions  
(*Protocol*)

- **noun:** code of correct conduct (Example: "Safety protocols")
- **noun:** forms of ceremony and etiquette observed by diplomats and heads of state
- **noun:** (computer science) rules determining the format and transmission of data

Encyclopedia article

A **protocol** is a rule which guides how an activity should be performed. Formerly used mainly in the diplomatic and government fields of endeavor to denote unwritten guidelines, by the turn of the twenty first century it had come into wide use in the computer and

- 20. [protocol](#) : LookWAYup Translating Dictionary/Thesaurus [[home](#), [info](#)]
- 21. [protocol](#) : Encyclopedia.com [[home](#), [info](#)]

communications fields.  
([continued](#) at Wikipedia)

➔ **Art** (4 matching dictionaries)

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- 22. [Protocol](#) : English-Chinese Dictionary of Graphic Communications (Big 5) [[home](#), [info](#)]
- 23. [PROTOCOL](#) : Technical Glossary of Theatre Terms [[home](#), [info](#)]
- 24. [protocol](#) : The Organon: A Conceptually Indexed Dictionary (by Genus and Differentia) [[home](#), [info](#)]
- 25. [protocol](#) : ODLIS: Online Dictionary of Library and Information Science [[home](#), [info](#)]

➔ **Business** (6 matching dictionaries)

- 26. [Protocol](#) : MoneyGlossary.com [[home](#), [info](#)]
- 27. [protocol](#) : International Law [[home](#), [info](#)]
- 28. [protocol](#) : Travel Industry Dictionary [[home](#), [info](#)]
- 29. [Protocol](#) : THE 'LECTRIC LAW LIBRARY'S REFERENCE ROOM [[home](#), [info](#)]
- 30. [Protocol](#) : eyefortransport e-commerce transportation glossary [[home](#), [info](#)]
- 31. [Protocol](#) : Glossary of Trade and Shipping Terms [[home](#), [info](#)]

➔ **Computing** (18 matching dictionaries)

- 32. [protocol](#) : Free On-line Dictionary of Computing [[home](#), [info](#)]
- 33. [protocol](#) : Netlingo [[home](#), [info](#)]
- 34. [protocol](#) : Hutchinson Dictionary of Computers, Multimedia, and the Internet [[home](#), [info](#)]
- 35. [protocol](#) : CCI Computer [[home](#), [info](#)]
- 36. [protocol](#) : Butterfly Glossary (networking terminology) [[home](#), [info](#)]
- 37. [protocol](#) : CNET Internet Glossary [[home](#), [info](#)]
- 38. [protocol](#) : Computer Telephony & Electronics Dictionary and Glossary [[home](#), [info](#)]
- 39. [protocol](#) : Glossary of Internet Terms [[home](#), [info](#)]
- 40. [Protocol](#) : TECHNICAL [[home](#), [info](#)]
- 41. [protocol](#) : Dictionary of Computing and Digital Media [[home](#), [info](#)]
- 42. [protocol](#) : whatis? [[home](#), [info](#)]
- 43. [Protocol](#) : Internet and Unix [[home](#), [info](#)]
- 44. [Protocol](#) : Internet Terms [[home](#), [info](#)]
- 45. [Protocol](#) : Internet Terms [[home](#), [info](#)]
- 46. [protocol](#) : Glossary of Communications, Computer, Data, and



Information Security Terms [[home](#), [info](#)]

- 47. [protocol](#) : Webopedia [[home](#), [info](#)]
- 48. [protocol](#) : Hacking Lexicon [[home](#), [info](#)]
- 49. [PROTOCOL](#) : SELF PACED INTERNET GUIDE [[home](#), [info](#)]

➡ **Medicine** (12 matching dictionaries)

- 50. [protocol](#) : Stedman's Online Medical Dictionary, 27th Edition [[home](#), [info](#)]
- 51. [protocol](#) : The On-line Medical Dictionary [[home](#), [info](#)]
- 52. [protocol](#) : Dorland's Illustrated Medical Dictionary [[home](#), [info](#)]
- 53. [protocol](#) : ABTA Brain Tumor Patients [[home](#), [info](#)]
- 54. [Protocol](#) : The TCRC Glossary For Testicular Cancer and Related Conditions [[home](#), [info](#)]
- 55. [PROTOCOL](#) : CPCRA AIDS Specific and Clinical Trials Terminology [[home](#), [info](#)]
- 56. [PROTOCOL](#) : Lay Terms for Consent Forms [[home](#), [info](#)]
- 57. [PROTOCOL](#) : AIDS 101 [[home](#), [info](#)]
- 58. [PROTOCOL](#) : Glossary of HIV/AIDS-Related Terms [[home](#), [info](#)]
- 59. [protocol](#) : Prostate Cancer Interactive Glossary [[home](#), [info](#)]
- 60. [Protocol](#) : Glossary of Lymphoma Terms [[home](#), [info](#)]
- 61. [protocol](#) : Dictionary of Cancer Terms [[home](#), [info](#)]

➡ **Miscellaneous** (1 matching dictionary)

- 62. [protocol](#) : Political [[home](#), [info](#)]

➡ **Religion** (1 matching dictionary)

- 63. [Protocol](#) : Catholic Encyclopedia [[home](#), [info](#)]

➡ **Science** (3 matching dictionaries)

- 64. [Protocol](#) : AGI GIS [[home](#), [info](#)]
- 65. [protocol](#) : US Environmental Protection Agency Terminology Reference System [[home](#), [info](#)]
- 66. [protocol](#) : FOLDOP - Free On Line Dictionary Of Philosophy [[home](#), [info](#)]

➡ **Sports** (1 matching dictionary)

- 67. [protocol](#) : Hickok Sports Glossaries [[home](#), [info](#)]

➡ **Tech** (9 matching dictionaries)

- 68. [Protocol](#) : ATM Forum Glossary [[home](#), [info](#)]
- 69. [Protocol](#) : AUTOMOTIVE TERMS [[home](#), [info](#)]
- 70. [Protocol](#) : FLW Technical [[home](#), [info](#)]
- 71. [Protocol](#) : Glossary of video terms [[home](#), [info](#)]
- 72. [protocol](#) : National Instruments [[home](#), [info](#)]
- 73. [Protocol](#) : Data Acquisition [[home](#), [info](#)]
- 74. [protocol](#) : Rane Professional Audio Reference [[home](#), [info](#)]
- 75. [PROTOCOL](#) : Space and Electronic Warfare Lexicon [[home](#), [info](#)]
- 76. [Protocol](#) : Web Hosting Glossary [[home](#), [info](#)]

Phrases that include **protocol**: [file transfer protocol](#), [hypertext transfer protocol](#), [transmission control protocol](#), [internet protocol](#), [simple mail transfer protocol](#), [more...](#)

Words similar to **protocol**: [protooled](#), [protocolling](#), [protocolled](#), [protocolling](#), [communications protocol](#), [more...](#)

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**ReplayTV and TiVo** are personal television (PTV) products. Sometimes they go by personal video recorders, digital video recorders, digital network recorders, smart TV, video recording computers, time-shifted television, hard disk recorders, personal television receivers, television portals, or on-demand TV. Choose your favorite, or coin your own lingo by mixing and matching the above terms. Some naming conventions distinguish between the hardware unit (supplied by a third-party manufacturer) and the personal television service (supplied by SonicBlue or TiVo). This site only covers "stand-alone" units. Other personal television systems are available that combine functionality with satellite receivers, televisions, and cable boxes.

**What do they do?** They sit in between your television and your cable box, satellite receiver and/or antenna. Ideally, they act as a personal assistant, changing channels for you, recording programs that interest you, and helping you watch them when you want. They are more than just digital VCRs. Features common to both units include live TV buffering (the ability to pause/rewind television shows as they are broadcast), simultaneous digital recording and playback (the ability to watch a *recorded* show while recording another), short-term storage of recordings, dumping of recordings to videotape for long-term storage, an electronic program guide (EPG), time-shifted viewing, and timed recordings.

**ReplayTV Models.** SonicBlue's primary offering is the 5000 series, consisting of the 5040 (40-hour, replacing the 4040 and 4504), 5080 (80-hour, replacing the 4080 and 4508), 5160 (160-hour, replacing the 4160 and 4516), and the 5320 (320-hour, replacing the 4532). Panasonic's "Showstopper" models are discontinued, which were the PV-HS1000 (20-hour), PV-HS2000 (30-hour), and PV-HS3000 (60-hour). ReplayTV manufactured their own models for a while, back before they were acquired by SonicBlue. These were the 2001 (10-hour), 2003 (14-hour), 2020 (20-hour), 3020 (20-hour), 2004 (28-hour), 3030 (30-hour), and 3060 (60-hour). It is possible to still purchase many of these older models, and they will still work, although only the SonicBlue models will receive any further software upgrades.

**TiVo Models.** TiVo is now manufacturing their own branded unit, called the TiVo Series2 (60 and 80-hour). AT&T Broadband sells the 130040/230040 (40-hour), 140060 (60-hour), and 240080 (80-hour), all Series2-compatible. Philips models are designated PTV100/HDR112 (14 hours), HDR212 (20 hours), PTV300/HDR312 (30 hours), and HDR612 (60 hours), but it appears only the 60-hour is still in manufacture. Sony discontinued model SVR-2000 (30 hours), but recently released the SVR-3000 (80 hours), which is Series2-compatible. Thomson's model (40 hours) is manufactured under the Scenium brand and available in the U.K. only. All the discontinued models are forward-compatible and will work with the TiVo service.

**Feedback.** If you own a ReplayTV or TiVo unit -- particularly the

SonicBlue and TiVo Series2 offerings -- please let me know how I'm doing. Submit additions, corrections, and comments to [Eric W. Lund](#). Thanks to everyone who has written!

**Links.** [TiVo Community Forum](#) | [PVR Compare](#) (informative, highly recommended) | [ReplayTV Revealed](#) (Steve Martin) | [AV Science Bulliten Board](#) (PTV discussion forum) | [iwantptv.com](#) | [Marc's TiVo Experience](#) (Marc Shannon) | [ReplayTV Notes](#) (George Snyder) | [The Future of Television](#) (Don Meyer) | [TiVo FAQ](#) | [TiVo UK FAQ](#) | [ReplayTV FAQ](#) | [TiVo News](#) | [SonicBlue](#) official website | [TiVo](#) official website | Can I really cram these links in here, or what?

Changes to this site are annotated on the [History](#) page.

# The History

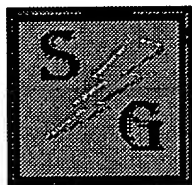
Updated:  
5 November, 2000



**This is a (non-comprehensive) list of milestones and events in the PTV saga.**

April 2000	The 30-Hour TiVo model is selling for \$400 at retailers.
March 2000	ReplayTV introduces the model 3000.
March 2000	ReplayTV releases version 2.0 of their software.
Nov 2, 1999	ReplayTV has introduced a new model, the 2020 which has 20 hours of recording time for \$700.
Nov 1999	TiVo available through several online retailers.
Oct 1999	The new Fall Prime Time Season has arrived, and after trying to set up both devices to deal with it, here's <u>my experiences</u> .
Sep 1999	TiVo is now being sold through the Best Buy & Sears chains of retail stores.
Sep 30, 1999	TiVo has gone public! As of Sep 30, 1999 shares of stock are being traded.
Sep 8, 1999	TiVo and Sony announce deal.
Jun 8, 1999	ReplayTV and Panasonic announce deal.

Jun 8, 1999	ReplayTV and Panasonic announce deal.
Mar 1999	ReplayTV ships units to consumers.
Mar 1999	TiVo ships units to consumers.



Software for the Palm OS® Platform

Please address any comments or questions to [donm@sgsw.com](mailto:donm@sgsw.com)

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Set	Items	Description
S1	57	AU='TOBIAS M':AU='TOBIAS M W K' OR AU='TOBIAS MARTIN' OR A- U='TOBIAS MARTIN B'
S2	12	AU='KITE B' OR AU='KITE BEVERLEY' OR AU='KITE BEVERLY'
S3	4	AU='BROWN MATHEWS'
S4	4	S1 AND S2 AND S3
S5	57	S1 OR S2 OR S3
S6	10	S5 AND IC=(G06F? OR H04N?)

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File 348:EUROPEAN PATENTS 1978-2003/May W04  
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File 349:PCT FULLTEXT 1979-2002/UB=20030529,UT=20030522  
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File 350:Derwent WPIX 1963-2003/UD,UM &UP=200334  
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6/5/1 (Item 1 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
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01199971

**DISTRIBUTED PRODUCTION SYSTEM FOR DIGITALLY ENCODING INFORMATION**  
**VERTEILTES PRODUKTIONSSYSTEM ZUR DIGITALEN ENKODIERUNG VON INFORMATION**  
**SYSTEME DECENTRALISE DE PRODUCTION D'INFORMATIONS A CODAGE NUMERIQUE**  
**PATENT ASSIGNEE:**

Loudeye Technologies, Inc., (3093910), 414 Olive Way, Suite 300, Seattle,  
WA 98101, (US), (Applicant designated States: all)

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**BROWN, Mathews** , 1118 E. John Street, Seattle, WA 98102, (US)  
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Munchen, (DE)

**PATENT (CC, No, Kind, Date):** EP 1151612 A1 011107 (Basic)  
WO 200048400 000817

**APPLICATION (CC, No, Date):** EP 2000908575 000211; WO 2000US3414 000211

**PRIORITY (CC, No, Date):** US 119762 P 990211; US 120206 P 990211; US 120207  
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US 499961 000208

**DESIGNATED STATES:** AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
LU; MC; NL; PT; SE

**INTERNATIONAL PATENT CLASS:** H04N-007/24

**CITED PATENTS (WO A):** XP 2142651 ; JP 1019874 A

**CITED REFERENCES (WO A):**

WO 9641285 A

"Encoding.com Launches Rich Media Advertising Service to Enable Use of  
Audio and Video Advertising on the Net" ONLINE , 26 October 1998  
(1998-10-26), pages 1-2, XP002142651 Retrieved from the Internet:  
<URL:encoding.com/company/news/releases/pr 10 26 98.html> retrieved on  
2000-07-11

**PATENT ABSTRACTS OF JAPAN** vol. 013, no. 198 (E-756), 11 May 1989  
(1989-05-11) & JP 01 019874 A (MATSUSHITA ELECTRIC WORKS LTD), 23  
January 1989 (1989-01-23);

**NOTE:**

No A-document published by EPO

**LEGAL STATUS (Type, Pub Date, Kind, Text):**

Application: 001011 A1 International application. (Art. 158(1))

Application: 001011 A1 International application entering European  
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Application: 011107 A1 Published application with search report

Examination: 011107 A1 Date of request for examination: 20010809

Change: 020502 A1 Inventor information changed: 20020313

**LANGUAGE (Publication,Procedural,Application):** English; English; English

6/5/2 (Item 2 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
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01199970

**SYSTEM FOR AUTOMATED COMPREHENSIVE REMOTE SERVICING FOR MEDIA INFORMATION**  
**SYSTEM FUR AUTOMATISIERTE UMFASSENDE FERNWARTUNG VON MEDIENINFORMATIONEN**  
**SYSTEME RELATIF A UN TELESERVICE AUTOMATISE ETENDU FOURNISSANT DES**  
**INFORMATIONS SUR DES MEDIA**  
**PATENT ASSIGNEE:**

Loudeye Technologies, Inc., (3093910), 414 Olive Way, Suite 300, Seattle,



WA 98101, (US), (Applicant designated States: all)

INVENTOR:

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LEGAL REPRESENTATIVE:

Dendorfer, Claus, Dr. et al (85562), Wachtershauser & Hartz Tal 29, 80331  
Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 1151611 A1 011107 (Basic)

WO 200048399 000817

APPLICATION (CC, No, Date): EP 2000908574 000211; WO 2000US3413 000211

PRIORITY (CC, No, Date): US 119762 P 990211; US 120209 P 990211; US 120207  
P 990211; US 120206 P 990211; US 120208 P 990211; US 156817 P 990929

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
LU; MC; NL; PT; SE

INTERNATIONAL PATENT CLASS: **H04N-007/24**

CITED PATENTS (WO A): XP 2142651

CITED REFERENCES (WO A):

WO 9641285 A

US 5852435 A

"Encoding.com Launches Rich Media Advertising Service to Enable Use of  
Audio and Video Advertising on the Net" ONLINE , 26 October 1998

(1998-10-26), pages 1-2, XP002142651 Retrieved from the Internet:

<URL:encoding.com/company/news/releases/pr 10 26 98.html> retrieved on  
2000-07-11 ;

NOTE:

No A-document published by EPO

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 001011 A1 International application. (Art. 158(1))

Application: 001011 A1 International application entering European  
phase

Application: 011107 A1 Published application with search report

Examination: 011107 A1 Date of request for examination: 20010809

LANGUAGE (Publication,Procedural,Application): English; English; English

6/5/3 (Item 1 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00735057 \*\*Image available\*\*

**DISTRIBUTED PRODUCTION SYSTEM FOR DIGITALLY ENCODING INFORMATION**

**SYSTEME DECENTRALISE DE PRODUCTION D'INFORMATIONS A CODAGE NUMERIQUE**

Patent Applicant/Assignee:

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200048400 A1 20000817 (WO 0048400)

Application: WO 2000US3414 20000211 (PCT/WO US0003414)

Priority Application: US 99119762 19990211; US 99120206 19990211; US  
99120207 19990211; US 99120208 19990211; US 99120209 19990211; US  
99156817 19990929; US 2000499961 20000208

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CZ DE DK DM  
EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KR KZ LC LK LR LS LT

· LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR  
TT TZ UA UG UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: **H04N-007/24**

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 10742

#### English Abstract

A method and system for encoding digital information is disclosed. According to the method, media program information is captured and used to produce a media program file. An encoding request is received from a client which requests that the media program information be encoded in one or more encoding formats. A set of encoding engines are selected that can encode the media program information in each of the one or more encoding formats. The media program file is then sent to the selected set of encoding engines to encode the media program information in the one or more encoding formats.

#### French Abstract

L'invention porte sur un procede et un systeme de codage d'informations. Le procede consiste a saisir des informations sur des programmes de media et a les utiliser pour produire un fichier de programmes. Une demande de codage emanant d'un client demande que les informations sur les programmes soit codees en un ou plusieurs formats de codage. Un ensemble selectionne d'automates de codage code lesdites informations dans le ou les formats de codage. Le fichier de programme est alors transmis auxdits automates pour coder les programmes dans le ou les formats de codage.

Legal Status (Type, Date, Text)

Publication 20000817 A1 With international search report.

Publication 20000817 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

Examination 20001102 Request for preliminary examination prior to end of 19th month from priority date

**6/5/4 (Item 2 from file: 349)**

DIALOG(R) File 349:PCT FULLTEXT

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00735056 \*\*Image available\*\*

**SYSTEM FOR AUTOMATED COMPREHENSIVE REMOTE SERVICING FOR MEDIA INFORMATION  
SYSTEME RELATIF A UN TELESERVICE AUTOMATISE ETENDU FOURNISSANT DES  
INFORMATIONS SUR DES MEDIA**

Patent Applicant/Assignee:

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**BRANDT Carl L, McDermott, Will & Emery**, 600 13th Street, NW, Washington,  
DC 20005-3096, US

Patent and Priority Information (Country, Number, Date):

Patent: WO 200048399 A1 20000817 (WO 0048399)

Application: WO 2000US3413 20000211 (PCT/WO US0003413)

Priority Application: US 99119762 19990211; US 99120209 19990211; US  
99120207 19990211; US 99120206 19990211; US 99120208 19990211; US

99156817 19990929

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CZ DE DK DM  
EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KR KZ LC LK LR LS LT  
LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR  
TT TZ UA UG UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: H04N-007/24

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 8376

#### English Abstract

A method and system for comprehensive remote servicing of media program information is disclosed. According to the method, automated facilities are provided for uploading media program information through an internet connection to an automated encoding system. An encoding request is received from a client which requests that the media program information be encoded in one or more encoding formats to produce publication-ready-internet-enabled media information. Automated facilities also provide ancillary services associated with the publication-ready-internet-enabled media information such as organization control, design control and publication control of the publication-ready-internet-enabled media information.

#### French Abstract

L'invention porte sur un procede et un systeme relatifs a un teleservice automatise etendu fournissant des informations sur des programmes de media. Le procede recourt a des installations automatisees pour telecharger des programmes vers un systeme automatise de codage via une connexion Internet. La demande de codage emanant du client precise que l'information sur les programmes soit codee en un ou plusieurs formats de codage de maniere a obtenir des informations pretes pour la publication validees par Internet. Les installations automatisees comportent egalement des services annexes associes aux informations pretes pour la publication validees par Internet tels que la gestion de l'organisation, de la forme et de la publication desdites informations.

#### Legal Status (Type, Date, Text)

Publication 20000817 A1 With international search report.

Publication 20000817 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

6/5/5 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014595256 \*\*Image available\*\*

WPI Acc No: 2002-415960/200244

XRPX Acc No: N02-327285

**Integrated voice provision method in communication network, involves placing received television programming, data and telephone communications in common format, to provide integrated service offering**

Patent Assignee: SANDSTREAM TECHNOLOGIES INC (SAND-N)

Inventor: EASTY A D; ROBBINS P T; TOBIAS M J ; WENDT T C

Number of Countries: 096 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200221837	A1	20020314	WO 2001US26203	A	20010821	200244 B
AU 200185187	A	20020322	AU 200185187	A	20010821	200251

Priority Applications (No Type Date): US 2000644165 A 20000822

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200221837 A1 E 53 H04N-007/173

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA  
CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN  
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ  
PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200185187 A H04N-007/173 Based on patent WO 200221837

Abstract (Basic): WO 200221837 A1

NOVELTY - Television programming, data and telephone communications received from a programming source (14), data and telephone networks (18,16) respectively, are placed in a common format for integrated communication over a single network infrastructure using common communication protocol. The communicated data are transmitted to more customers (12), to provide integrated service offering.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for integrated voice provision system.

USE - For provision of integrated voice in communication and networking field.

ADVANTAGE - Since all services are provided to customer premises using single network infrastructure, problems associated with delivering in compatible services are eliminated. Allows for enhanced trouble shooting, fault-tolerance access restriction with high efficiency.

DESCRIPTION OF DRAWING(S) - The figure shows an explanatory network of integrated delivery voice provision system.

Customers (12)

Programming source (14)

Data and telephone networks (18,16)

pp; 53 DwgNo 1/15

Title Terms: INTEGRATE; VOICE; PROVISION; METHOD; COMMUNICATE; NETWORK;

PLACE; RECEIVE; TELEVISION; PROGRAM; DATA; TELEPHONE; COMMUNICATE; COMMON  
; FORMAT; INTEGRATE; SERVICE; OFFER

Derwent Class: W01; W02

International Patent Class (Main): H04N-007/173

File Segment: EPI

6/5/6 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014051840 \*\*Image available\*\*

WPI Acc No: 2001-536053/200159

Related WPI Acc No: 2000-549204; 2000-664744; 2000-664745

XRPX Acc No: N01-398151

**Temporal modification incorporation method in streaming media content,  
involves delivering streaming media data to client for playing at  
multiple play rates**

Patent Assignee: LOUDEYE TECHNOLOGIES INC (LOUD-N)

Inventor: KITE B ; MATHEWS M; TOBIAS M

Number of Countries: 091 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200124530	A2	20010405	WO 2000US26832	A	20000929	200159 B
AU 200077353	A	20010430	AU 200077353	A	20000929	200159
EP 1221238	A2	20020710	EP 2000967103	A	20000929	200253
			WO 2000US26832	A	20000929	

Priority Applications (No Type Date): US 99156817 P 19990929

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200124530 A2 E 26 H04N-007/24

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA  
CH CN CR CZ DE DK DM DZ EE ES FI GB GE GH GM HR HU ID IL IN IS JP KE KG  
KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD  
SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

AU 200077353 A H04N-007/24 Based on patent WO 200124530

EP 1221238 A2 E H04L-029/06 Based on patent WO 200124530

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI

Abstract (Basic): WO 200124530 A2

NOVELTY - The method involves generating one or more temporal media files by applying a temporal encoding process to media content.

Streaming media data is generated based on the temporal media file. The streaming media data is delivered to a client (110) which is capable of being played at the client at multiple play rates.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) Computer readable medium for incorporating temporal modifications in streaming media content;

(b) Server apparatus;

(c) Method of playing digital content at a client

USE - Used for streaming media files.

ADVANTAGE - Provides media content that allows for multiple playback speed control at a client. Provides improved method for delivering streaming media data and played at a client without affecting amplitude of the data. Increases or slows down the speed of the media content.

DESCRIPTION OF DRAWING(S) - The figure shows block diagram of temporal encoding system.

Client (110)

pp; 26 DwgNo 1A/5

Title Terms: TEMPORAL; MODIFIED; INCORPORATE; METHOD; STREAM; MEDIUM;

CONTENT; DELIVER; STREAM; MEDIUM; DATA; CLIENT; PLAY; MULTIPLE; PLAY;

RATE

Derwent Class: W02

International Patent Class (Main): H04L-029/06; H04N-007/24

File Segment: EPI

6/5/7 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013492802 \*\*Image available\*\*

WPI Acc No: 2000-664745/200064

Related WPI Acc No: 2000-549204; 2000-664744; 2001-536053

XRPX Acc No: N00-492691

Digital information encoding method using distributed production system, involves selecting set of encoding engines that can encode media program information in each of requested encoding formats

Patent Assignee: LOUDEYE TECHNOLOGIES INC (LOUD-N)

Inventor: BROWN M; HANSEN A; KITE B; LINDVALL E; MALLEY G; OBERLANDER J;

ROBERTS A; SUZUKI K; TOBIAS M

Number of Countries: 088 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200048400	A1	20000817	WO 2000US3414	A	20000211	200064 B
AU 200029888	A	20000829	AU 200029888	A	20000211	200064
EP 1151612	A1	20011107	EP 2000908575	A	20000211	200168
			WO 2000US3414	A	20000211	
JP 2002537572	W	20021105	JP 2000599211	A	20000211	200304
			WO 2000US3414	A	20000211	

Priority Applications (No Type Date): US 2000499961 A 20000208; US 99119762

P 19990211; US 99120206 P 19990211; US 99120207 P 19990211; US 99120208 P 19990211; US 99120209 P 19990211; US 99156817 P 19990929

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 200048400	A1	E	37	H04N-007/24	
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Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

AU 200029888	A			H04N-007/24	Based on patent WO 200048400
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EP 1151612	A1	E		H04N-007/24	Based on patent WO 200048400
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Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

JP 2002537572	W		45	G10L-019/00	Based on patent WO 200048400
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Abstract (Basic): WO 200048400 A1

NOVELTY - The encoding request with unique master ID that requests media program information to be encoded in predefined encoding formats is received, after capturing media program information to be encoded. The set of encoding engines that can encode the media program information in each of requested encoding formats, are selected. The media program information is encoded using selected encoding engines.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) digital information encoding system;

(b) encoding program stored in computer readable medium

USE - For encoding digital information in storage mediums such as VHS or 8-MM tapes, DVD or laser discs, beta cams or digital video cassette, compact discs and audio cassettes or 8-track tapes using distributed production system connected to LAN, WAN, internet. Also for encoding media program from analog or digital computer or from satellite or cable feed.

ADVANTAGE - By encoding media program in multiple encoding formats in parallel, the distributed encoding mechanism is able to significantly reduce the overhead that is typically required for encoding media programs in multiple encoding formats. The common parameter interface reduces complexity of user interface and limits the specific encoding knowledge that a user is typically required to hold in order to properly submit an encoding format. Hard wired circuit can be used in place of or in combination with software instructions to implement the digital information encoding.

DESCRIPTION OF DRAWING(S) - The figure shows the diagram explaining user interface window that can be used to define set of encoding specifications for encoding particular file.

pp; 37 DwgNo 2/6

Title Terms: DIGITAL; INFORMATION; ENCODE; METHOD; DISTRIBUTE; PRODUCE; SYSTEM; SELECT; SET; ENCODE; ENGINE; CAN; ENCODE; MEDIUM; PROGRAM; INFORMATION; REQUEST; ENCODE; FORMAT

Derwent Class: P86; T01; W01; W02; W04

International Patent Class (Main): G10L-019/00; H04N-007/24

International Patent Class (Additional): G10K-015/02; H04N-007/173

File Segment: EPI; EngPI

6/5/8 (Item 4 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013492801 \*\*Image available\*\*

WPI Acc No: 2000-664744/200064

Related WPI Acc No: 2000-549204; 2000-664745; 2001-536053

XRPX Acc No: N00-492690

Automated media program remote servicing method involves allowing selective access to one or more encoded media files over the network  
Patent Assignee: LOUDEYE TECHNOLOGIES INC (LOUD-N)

Inventor: BROWN M; KITE B ; TOBIAS M  
Number of Countries: 088 Number of Patents: 003  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200048399	A1	20000817	WO 2000US3413	A	20000211	200064 B
AU 200029887	A	20000829	AU 200029887	A	20000211	200064
EP 1151611	A1	20011107	EP 2000908574	A	20000211	200168
			WO 2000US3413	A	20000211	

Priority Applications (No Type Date): US 99156817 P 19990929; US 99119762 P 19990211; US 99120206 P 19990211; US 99120207 P 19990211; US 99120208 P 19990211; US 99120209 P 19990211

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200048399	A1	E	38	H04N-007/24	
Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW					
AU 200029887	A			H04N-007/24	Based on patent WO 200048399
EP 1151611	A1	E		H04N-007/24	Based on patent WO 200048399
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					

Abstract (Basic): WO 200048399 A1

NOVELTY - The media program encoded in one or more encoding formats, are automatically hosted on server (112a-112c) in response to the reception of secondary request from an end-user client (102), to host the encoded media files. The server allows selective access to one or more encoded media files over the network.

DETAILED DESCRIPTION - A primary request is received over the network from the client to encode the media program file in one or more encoding formats. The primary request is serviced by generating one or more encoded media files, by encoding the media program in response to the reception of the request. An INDEPENDENT CLAIM is also included for media program remote servicing program.

USE - For automated comprehensive remote servicing of media program such as audio, photograph, feature films, digital movies.

ADVANTAGE - The end-user can share the encoded media file with his/her family, friends and business associates. Since end-user's media program can be encoded in multiple media formats, the comprehensive services associated with the publication of encoded media files can be provided automatically.

DESCRIPTION OF DRAWING(S) - The figure shows block diagram of automated comprehensive remote servicing system.

Client (102)

Servers (112a-112c)

pp; 38 DwgNo 1/5

Title Terms: AUTOMATIC; MEDIUM; PROGRAM; REMOTE; SERVICE; METHOD; ALLOW;

SELECT; ACCESS; ONE; MORE; ENCODE; MEDIUM; FILE; NETWORK

Derwent Class: T01; W01; W02; W04

International Patent Class (Main): H04N-007/24

File Segment: EPI

6/5/9 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013377266 \*\*Image available\*\*

WPI Acc No: 2000-549204/200050

Related WPI Acc No: 2000-664744; 2000-664745; 2001-536053

XRPX Acc No: N00-406295

Media content distribution regulation for computer system, involves decrypting encrypted media files, on receiving requests from client and

delivering decrypted file to client, based on distribution rules

Patent Assignee: LOUDEYE TECHNOLOGIES INC (LOUD-N)

Inventor: BROWN M; KITE B; OBERLANDER J; SAWICKI T; SUTTON B; THOMAS K;

TOBIAS M; HANSEN A; LINDVALL E; MALLEY G; ROBERTS A; SUZUKI K

Number of Countries: 088 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200048375	A1	20000817	WO 2000US3412	A	20000211	200050 B
AU 200029886	A	20000829	AU 200029886	A	20000211	200062
EP 1151592	A1	20011107	EP 2000908573	A	20000211	200168
			WO 2000US3412	A	20000211	
EP 1151612	A1	20011107	EP 2000908575	A	20000211	200168
			WO 2000US3414	A	20000211	
JP 2002541687	W	20021203	JP 2000599191	A	20000211	200309
			WO 2000US3412	A	20000211	

Priority Applications (No Type Date): US 99156817 P 19990929; US 99119762 P 19990211; US 99120206 P 19990211; US 99120207 P 19990211; US 99120208 P 19990211; US 99120209 P 19990211; US 2000499961 A 20000208

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200048375 A1 E 56 H04L-029/06

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

AU 200029886 A H04L-029/06 Based on patent WO 200048375

EP 1151592 A1 E H04L-029/06 Based on patent WO 200048375

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

EP 1151612 A1 E H04N-007/24 Based on patent WO 200048400

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

JP 2002541687 W 54 H04N-007/173 Based on patent WO 200048375

Abstract (Basic): WO 200048375 A1

NOVELTY - The subscription package with distribution rules and one or more encrypted media files, is generated, in response to request and delivered to affiliate server connected to network. The affiliate server decrypts the encrypted media files, on receiving requests from clients connected to network and delivers the decrypted media files to clients based on distribution rules.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) computer readable medium with instructions for regulating distribution of media content over network;

(b) system for regulating distribution of media content over network

USE - For computer system especially in media distribution system such as internet.

ADVANTAGE - Allows for distribution of media content from affiliate servers thus reducing the chance to reproduce unauthorized copies of media content.

DESCRIPTION OF DRAWING(S) - The figure shows the mechanism for registering encoded files and associated program, metadata into distribution server.

pp; 56 DwgNo 4/13

Title Terms: MEDIUM; CONTENT; DISTRIBUTE; REGULATE; COMPUTER; SYSTEM;

ENCRYPTION; MEDIUM; FILE; RECEIVE; REQUEST; CLIENT; DELIVER; FILE; CLIENT ; BASED; DISTRIBUTE; RULE

Derwent Class: P85; T01; W01; W02; W04

International Patent Class (Main): H04L-029/06; H04N-007/173 ;

H04N-007/24

International Patent Class (Additional): G09C-001/00; H04L-009/08

File Segment: EPI; EngPI



6/5/10 (Item 6 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
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009692483 \*\*Image available\*\*  
WPI Acc No: 1993-386037/199348  
Related WPI Acc No: 1992-049342  
XRPX Acc No: N93-298212

Byte swapping circuit selectively ordering bytes of 16 or 32 bit word -  
includes four groups of buffers which are disposed in parallel along  
internal bus of circuit.

Patent Assignee: XYCOM INC (XYCO-N)  
Inventor: MARESH A J; TOBIAS M R  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5265237	A	19931123	US 88281261	A	19881207	199348 B
			US 90500786	A	19900328	

Priority Applications (No Type Date): US 90500786 A 19900328; US 88281261 A  
19881207

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 5265237	A	21	G06F-007/00	CIP of application US 88281261

Abstract (Basic): US 5265237 A

The circuit includes an AT computer having a CPU. A control register responsive to the CPU generates four control signals indicative of four byte orders. Four byte ordering units responsive to the control register selectively order the bytes as A,B,C and D bytes and transfers them between the CPU and a VMEbus. A bus is in communication with the AT computer and the four byte ordering units. The byte ordering units are disposed in parallel with the bus. The first byte ordering unit moves the A byte to 24-31 bit positions, the B byte to 16-23 bit positions, the C byte to 8-15 bit positions, and the D byte to 0-7 bit positions, in response to the first control signal. The second byte ordering unit maintains the A byte at 0-7 bit positions, the B byte at 8-15 bit positions, the C byte at 16-23 bit positions, and the D byte at 24-31 bit positions in response to the second control signal.

The third byte ordering unit moves the A byte to the 8-15 bit positions and the B byte to the 0-7 bit positions, in response to the third control signal. The fourth byte ordering unit moves the D byte to the 8-15 bit positions and the C byte to the 0-7 bit positions, in response to the fourth control signal. The control register generates one of the four control signals at a time to selectively enable one of the byte ordering units to effect a desired byte ordering of the N-bit word.

USE/ADVANTAGE - For interconnecting VMEbus and IBM PC/XT and AT bus architectures.

Dwg.10/10

Title Terms: BYTE; CIRCUIT; SELECT; ORDER; BYTE; BIT; WORD; FOUR; GROUP;  
BUFFER; DISPOSABLE; PARALLEL; INTERNAL; BUS; CIRCUIT

Derwent Class: T01

International Patent Class (Main): G06F-007/00

International Patent Class (Additional): G06F-013/38

File Segment: EPI

Set	Items	Description
S1	602315	CLIENT? OR VIEWER? OR USER? OR STANDALONE OR STAND()ALONE - OR PC OR PCS OR PERSONAL()COMPUTER? OR WORKSTATION? OR WORK()- STATION? OR NODE?
S2	915359	REQUEST? OR ASK OR ASKS OR ASKED OR ASKING OR PETITION? OR CALL() (ON OR UPON) OR QUER? OR QUESTION? OR INQUIR? OR DEMAND? OR REQUISITION OR APPLY OR APPLYING
S3	1999152	CAPTUR? OR MEMORY OR CACHE? OR STORE? ? OR STORING OR SAVE OR SAVING OR KEEP? ? OR KEEPING
S4	1830661	SOURCE()FILE? OR (TV OR TELEVISION OR RADIO) () (SHOW? OR PR- OGRAM? OR BROADCAST?) OR MEDIA()ASSET? OR VIDEO? OR AUDIO? OR MULTIMEDIA OR MEDIA OR ENTERTAINMENT()INFORMATION OR DATA
S5	3111402	TIME OR SCHEDULE? OR PERIOD OR DURATION OR SIMULTANEOUS? OR CONCURRENT?
S6	286682	ENCOD??? OR DECOD??? OR ENCRYPT??? OR CIPHER? OR CYPHER? OR DECRYPT? OR CYPHERTEXT OR ENCYPHER? OR UNCOD? OR UNENCRYPT? - OR ENCIPHER? OR UNCOD? OR DECIHER? OR UNCYPHER? OR UNCYPHER? - OR CYPTO?
S7	626997	PUBLISH? OR ISSUE OR DISPURS? OR DISTRIBUT?
S8	1991003	DIFFERENT OR ANOTHER OR SEPARATE OR TARGET
S9	4524626	TRANSFER? OR STREAM? OR SEND? OR TRANSMIT? OR TRANSMISSION OR GENERAT? OR PLAY? OR BROADCAST?
S10	1681	S1 AND S2 AND S3 AND (S4 (3N) S5)
S11	111	S10 AND S6
S12	888	S7 AND (S8 (3N) S5) AND S9
S13	0	S11 AND S12
S14	1695	S7 AND (S8 (3N) S5)
S15	0	S11 AND S14
S16	1	S11 AND (S7 (3N) S5)
S17	2370	S2 AND S3 AND S4 AND S5 AND S6
S18	4896886	S7 OR S9
S19	15831	S18 AND (S8 (3N) S5)
S20	27	S17 AND S19
S21	19	S20 AND IC=(G06F? OR H04N? OR G11B?)

File 347:JAPIO Oct 1976-2003/Jan(Updated 030506)

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File 350:Derwent WPIX 1963-2003/UD,UM &UP=200334

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21/5/1 (Item 1 from file: 347)  
DIALOG(R) File 347:JAPIO  
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06464472 \*\*Image available\*\*  
DATA DISTRIBUTION METHOD

PUB. NO.: 2000-050047 [JP 2000050047 A]  
PUBLISHED: February 18, 2000 (20000218)  
INVENTOR(s): YODA AKIRA  
APPLICANT(s): FUJI PHOTO FILM CO LTD  
APPL. NO.: 10-212801 [JP 98212801]  
FILED: July 28, 1998 (19980728)  
INTL CLASS: H04N-001/387 ; G06F-012/14 ; G06F-013/00 ; G09C-005/00;  
G11B-020/10 ; H04L-012/54; H04L-012/58; H04N-007/08 ;  
H04N-007/081

#### ABSTRACT

PROBLEM TO BE SOLVED: To discriminate whether a person has propriety rights or not by burying information specifying a **distribution** destination opposite party and more preferably, the person having the propriety rights in **data** in an electronic watermark form which is inseparable from the **data** in **distributing** the **data** such as picture **data** and sound **data** to a person except for the person having the propriety rights.

SOLUTION: When a client 12 **requests** access to a **stored** picture of a picture server 10, the input of information specifying the client 12 is **requested** from the picture server 10. Client side information and information such as on access date/ **time** and use **target** classification of which the client 12 inputs and possessor information from the picture server 10 which corresponds to the picture, are buried in picture **data** 20 by a watermark **encoder** 13. Buried information is also divided to respective information such as an alteration preventing code with weak resistance, a client with strong resistance, the access date/ **time**, an author and portrait rights. Thus, the proprietorial rights can be insisted and the presence or absence of the alteration of the **data** can be discriminated.

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21/5/2 (Item 2 from file: 347)  
DIALOG(R) File 347:JAPIO  
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05669962 \*\*Image available\*\*  
DEVICE AND METHOD FOR SUPPLYING VIDEO MATERIAL

PUB. NO.: 09-284762 [JP 9284762 A]  
PUBLISHED: October 31, 1997 (19971031)  
INVENTOR(s): YOSHINARI HIROMI  
SUZUKI TAKAO  
APPLICANT(s): SONY CORP [000218] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 08-091597 [JP 9691597]  
FILED: April 12, 1996 (19960412)  
INTL CLASS: [6] H04N-007/24 ; H04N-007/08 ; H04N-007/081  
JAPIO CLASS: 44.6 (COMMUNICATION -- Television)

#### ABSTRACT

PROBLEM TO BE SOLVED: To evade the failure of a VBV butter and to **keep** the continuity of a joint by unifying a VBV buffer occupancy amount at the **time** of connecting **different** insertion materials with each other.

SOLUTION: A program **stream** ps1 is **encoded** in a first MPEG **encoder** 113 and the obtained bit **generation** amount information is sent to a host CPU 114. By the control of the CPU 114 by it, a second MPEG **encoder** 115

compression- **encodes** the **stream** **ps1** so as to make a bit rate same in the respective insertion materials and the VBV buffer occupancy amount of a splice point is unified so as to continue images after splicing at the **time** of the transportation **streams** of the respective insertion materials later. The compression **encoded** bit **stream** of the output of the **encoder** 115 is turned to the transportation **stream** **TS1** in a primary MUX 116 and **stored** in a material server 21. Similarly, the **streams** **TS2-4** from the other insertion material **encoders** 120-140 are **stored** as well and taken out from the server 21, combined and connected by the **request** of a user.

21/5/3 (Item 3 from file: 347)  
DIALOG(R) File 347:JAPIO  
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04927184 \*\*Image available\*\*  
INTERRUPTION CONTROL SYSTEM

PUB. NO.: 07-219784 [JP 7219784 A]  
PUBLISHED: August 18, 1995 (19950818)  
INVENTOR(s): IKUMICHI YUICHI  
KAMIYA TOSHIZANE  
APPLICANT(s): MEIDENSHA CORP [000610] (A Japanese Company or Corporation),  
JP (Japan)  
APPL. NO.: 06-007956 [JP 947956]  
FILED: January 28, 1994 (19940128)  
INTL CLASS: [6] **G06F-009/46**  
JAPIO CLASS: 45.1 (INFORMATION PROCESSING -- Arithmetic Sequence Units)  
JAPIO KEYWORD: R131 (INFORMATION PROCESSING -- Microcomputers &  
Microprocessors)

#### ABSTRACT

PURPOSE: To prevent the loss of interval timer interruption.

CONSTITUTION: In this interruption control system, an interruption control part 303 receives an interruption signal **generated** at specified periods from a timer circuit 301 and a general interruption signal, a processor 307 interrupt-processes from an interruption **request** from the interruption control part and vector **data**, and at the **time** of **generating another** interruption while this processing, the interruption control part holds the interruption state for one **time** for each interruption signal. In the interruption control system, an interruption state holding circuit 304 **stores** and holds the **generation** of an interval timer interruption signal and an NMI information circuit 305 NMI-informs the processor with a second interval timer interruption signal so as to execute an interval timer interruption processing. A vector **decoder** circuit 306 releases the states of the interruption state holding circuit and the NMI information circuit when the interval timer interruption processing is finished.

21/5/4 (Item 4 from file: 347)  
DIALOG(R) File 347:JAPIO  
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04378373 \*\*Image available\*\*  
**BROADCAST** RECEPTION RECORDING AND REPRODUCING DEVICE

PUB. NO.: 06-022273 [JP 6022273 A]  
PUBLISHED: January 28, 1994 (19940128)  
INVENTOR(s): KITAMURA MASAYOSHI  
ARAOKA MASAHIRO  
NISHI TOMOYA  
APPLICANT(s): VICTOR CO OF JAPAN LTD [000432] (A Japanese Company or  
Corporation), JP (Japan)  
APPL. NO.: 04-194979 [JP 92194979]  
FILED: June 29, 1992 (19920629)

INTL CLASS: [5] H04N-005/91 ; G11B-027/00 ; H04N-005/76 ; H04N-005/93

JAPIO CLASS: 44.6 (COMMUNICATION -- Television); 42.5 (ELECTRONICS -- Equipment)

JAPIO KEYWORD: R101 (APPLIED ELECTRONICS -- Video Tape Recorders, VTR)

JOURNAL: Section: E, Section No. 1543, Vol. 18, No. 234, Pg. 51, April 28, 1994 (19940428)

#### ABSTRACT

PURPOSE: To reproduce program information immediately by displaying a list of **stored** program information and selecting the program information from the list.

CONSTITUTION: The **broadcast** reception recording and reproducing device consists of an antenna 5 and a tuner 6 receiving **broadcast** program information 1, a recording reproduction controller 9 controlling the entire device, a key pad 7 used to enter the operation content, a timer 11 measuring a recording **time** 3 of the received program information 1, an **encoder** 10 **applying** compression coding to the program information 1, a disk recorder 12 recording the program information 1' subject to compression coding and the recording **time** 3 onto **separate** areas, a **decoder** 13 expanding the program information 1' subject to compression coding and **decoding** it into the original signal and a display device 14 outputting an **audio** signal and displaying a moving picture.

21/5/5 (Item 5 from file: 347)

DIALOG(R) File 347:JAPIO

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03211262 \*\*Image available\*\*

FACSIMILE EQUIPMENT

PUB. NO.: 02-186762 [JP 2186762 A]

PUBLISHED: July 23, 1990 (19900723)

INVENTOR(s): MAEDA TORU

APPLICANT(s): CANON INC [000100] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 01-004720 [JP 894720]

FILED: January 13, 1989 (19890113)

INTL CLASS: [5] H04M-011/00; H04N-001/00 ; H04N-001/32

JAPIO CLASS: 44.4 (COMMUNICATION -- Telephone); 44.7 (COMMUNICATION -- Facsimile)

JAPIO KEYWORD: R098 (ELECTRONIC MATERIALS -- Charge **Transfer** Elements, CCD & BBD); R131 (INFORMATION PROCESSING -- Microcomputers & Microprocessors)

JOURNAL: Section: E, Section No. 987, Vol. 14, No. 461, Pg. 119, October 05, 1990 (19901005)

#### ABSTRACT

PURPOSE: To facilitate the operation of an operator, and to realize the reduction of a communication error or the shortening of a communication **time** by outputting a **different** operator call tone every line, and **storing** beforehand the parameter of a line to be connected in a **memory**.

CONSTITUTION: **Data** is **decoded** by a secondary code **decoding** circuit 17 into an MR or an MH code a remote party facsimile 32 **requests**, and is modulated by a MODEM 19, and is **transmitted** from an external NCU 23 to a facsimile 32 through a line wire 31. After the desired **data** is **transmitted**, **transmission** post-procedure is executed by a G3 facsimile procedure by using the MODEM 19 and the external NCU 23. It is checked whether the post-procedure processing is an operator call post-procedure or not, and in the case of the operator call post-procedure, operator call processing is executed, and it is shown that it is an operator call from the line wire 31. A speaker drive circuit 35 is instructed to output a call tone peculiar to a line wire operator call, and the peculiar call tone by which it can be easily recognized that it is the operator call from the

line wire is outputted from a speaker 36.

21/5/6 (Item 6 from file: 347)  
DIALOG(R) File 347:JAPIO  
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03156196 \*\*Image available\*\*  
DISK REPRODUCING DEMODULATOR AND MUSE DECODER

PUB. NO.: 02-131696 [JP 2131696 A]  
PUBLISHED: May 21, 1990 (19900521)  
INVENTOR(s): KITaura HIROSHI  
FURUMIYA SHIGERU  
APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company  
or Corporation), JP (Japan)  
APPL. NO.: 63-286144 [JP 88286144]  
FILED: November 11, 1988 (19881111)  
INTL CLASS: [5] H04N-009/85  
JAPIO CLASS: 44.6 (COMMUNICATION -- Television)  
JAPIO KEYWORD: R101 (APPLIED ELECTRONICS -- Video Tape Recorders, VTR);  
R102 (APPLIED ELECTRONICS -- Video Disk Recorders, VDR)  
JOURNAL: Section: E, Section No. 962, Vol. 14, No. 368, Pg. 59, August  
09, 1990 (19900809)

#### ABSTRACT

PURPOSE: To facilitate the analog conversion of a TBC output by applying sampling of a MUSE signal to apply digital signal processing of a time base collector TBC at a transmission clock in the case of digital interface and at a frequency higher than the transmission clock in the case of an analog interface.

CONSTITUTION: A digital MUSE signal having a timewise fluctuation obtained from an A/D converter 3 is written in a memory by using the same clock as the sampling clock of the A/D converter and read by using another clock whose time axis is stable to obtained a MUSE signal whose time axis is stable. A frequency divider circuit 18 and switches 16, 21 are interlocked and when a digital MUSE signal output is obtained, two frequency divider circuits have a frequency division ratio of 1/3, the switch 16 is closed and the switch 20 is connected to the side of a phase shift circuit 21. Moreover, when the analog muse signal output is obtained, the switches are thrown to the other side. Thus, the digital interface is effectively used.

21/5/7 (Item 7 from file: 347)  
DIALOG(R) File 347:JAPIO  
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02019400 \*\*Image available\*\*  
SEMICONDUCTOR STORAGE DEVICE

PUB. NO.: 61-233500 [JP 61233500 A]  
PUBLISHED: October 17, 1986 (19861017)  
INVENTOR(s): TAGUCHI MASAO  
TAKEMAE YOSHIHIRO  
APPLICANT(s): FUJITSU LTD [000522] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 60-074087 [JP 8574087]  
FILED: April 08, 1985 (19850408)  
INTL CLASS: [4] G11C-029/00; G06F-011/08  
JAPIO CLASS: 45.2 (INFORMATION PROCESSING -- Memory Units); 42.2  
(ELECTRONICS -- Solid State Components); 45.1 (INFORMATION  
PROCESSING -- Arithmetic Sequence Units  
JOURNAL: Section: P, Section No. 554, Vol. 11, No. 72, Pg. 55, March  
05, 1987 (19870305)

#### ABSTRACT

PURPOSE: To equalize required write **time** on a DRAM having an ECC circuit to that having no ECC circuit by constituting a parity **data** cell array of a **memory** where **data** write and read are attained **simultaneously** through **separate** systems independently.

CONSTITUTION: A check circuit 34 uses a clock .phi.(sub 3) to **apply** humming **decoding** to **data** in a register 28, that is, read **data** + parity **data** + write **data** , **generates** a syndrome and **stores** it in a register 30. When column **decoders** 14, 18 **apply** bit wire selection in a column address CAj, a column address CAi at preceding write is inputted to a column **decoder** 20 to **apply** bit line selection of a cell array 16. The **data** on a parity **data** bus 26 is inverted according to the output of the register 30 by an inverting circuit 46 and the result is written on a **memory** cell at a cross point between the selection bit line and the word line WLi. The syndrome this **time** is written on the same **memory** cell of the cell array 16 at the next write.

21/5/8 (Item 8 from file: 347)  
DIALOG(R)File 347:JAPIO  
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01718346 \*\*Image available\*\*  
MICROPROGRAM CONTROL SYSTEM

PUB. NO.: 60-196846 [JP 60196846 A]  
PUBLISHED: October 05, 1985 (19851005)  
INVENTOR(s): KAWAGISHI KYOJI  
APPLICANT(s): NEC CORP [000423] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 59-052898 [JP 8452898]  
FILED: March 19, 1984 (19840319)  
INTL CLASS: [4] G06F-009/22 ; G06F-009/46  
JAPIO CLASS: 45.1 (INFORMATION PROCESSING -- Arithmetic Sequence Units)  
JOURNAL: Section: P, Section No. 433, Vol. 10, No. 53, Pg. 35, March  
04, 1986 (19860304)

#### ABSTRACT

PURPOSE: To attain multiplex interruption in accessing by comparing interruption level information sent at the **time** of a reading **request** with a current one, and when both the **data** are different each other, **storing** the read-out **data** in a **data** **storing** part corresponding to the interruption level **generated** at an access **time** .

CONSTITUTION: If an interruption is **generated** immediately after a reading **request** , a program goes to an interruption processing routine, '1' is added to an interruption level signal and reading **data** 103 and an interruption level signal 102 obtained at the **time** of a reading **request** are sent. Since the interruption level signal at an access **time** is **different** from a current one, the former signal is **decoded** by a **decoder** 5 one address signal corresponding to said level signal is selected out of address signals 501-503 and the reading **data** 103 are set up in one register corresponding to the selected signal out of registers 41-43. Then '1' is subtracted from the interruption level signal by executing a return microinstruction or the like, a selector 7 selects an output 601 and a selector 6 selects **data** in the registers 41-43 to read out **data** corresponding to the reading microinstruction to an output 701.

21/5/11 (Item 3 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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012934344 \*\*Image available\*\*  
WPI Acc No: 2000-106191/200009  
Related WPI Acc No: 1999-429806  
XRPX Acc No: N00-081552

**Interactive application modification system for client server application**  
 Patent Assignee: ONLINE ANYWHERE (ONLI-N); YAHOO INC (YAHO-N); YAHOO CORP (YAHO-N)

Inventor: MENDHEKAR A; VISHWANATH M

Number of Countries: 087 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9966673	A1	19991223	WO 99US12955	A	19990611	200009 B
AU 9945560	A	20000105	AU 9945560	A	19990611	200024
EP 1086553	A1	20010328	EP 99928509	A	19990611	200118
			WO 99US12955	A	19990611	
US 6216157	B1	20010410	US 97970735	A	19971114	200122
			US 9898670	A	19980617	
CN 1312995	A	20010912	CN 99809735	A	19990611	200202
KR 2001071516	A	20010728	KR 2000714410	A	20001218	200208
JP 2002518766	W	20020625	WO 99US12955	A	19990611	200243
			JP 2000555391	A	19990611	
BR 9911281	A	20030107	BR 9911281	A	19990611	200309
			WO 99US12955	A	19990611	

Priority Applications (No Type Date): US 9898670 A 19980617; US 97970735 A 19971114

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
WO 9966673	A1 E	38	H04L-012/28	
Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW				
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW				
AU 9945560	A		H04L-012/28	Based on patent WO 9966673
EP 1086553	A1 E		H04L-012/28	Based on patent WO 9966673
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE				
US 6216157	B1		G06F-013/38	CIP of application US 97970735
CN 1312995	A		H04L-012/28	
KR 2001071516	A		H04L-012/28	
JP 2002518766	W	33	G06F-013/00	Based on patent WO 9966673
BR 9911281	A		H04L-012/28	Based on patent WO 9966673

Abstract (Basic): WO 9966673 A1

NOVELTY - An adaptive **transmission** transducer coupled to appliance specific transducer, modifies the appliance specific output based on at least one characteristic of the application and medium of **transmission** to **generate** an adapted output to be delivered through the medium to the client which **decodes** the adapted output to produce a modified version of the interactive application.

DETAILED DESCRIPTION - The appliance specific transducer (150) modifies the application based on at least one characteristic of the client and at least one characteristic of the application to **generate** an appliance specific output, in response to client's **request** for interactive application. INDEPENDENT CLAIMS are also included for the following:

- (a) server apparatus in server for delivering push application to client through a **transmission** medium;
- (b) client apparatus in client for **generating** modified version of push application received from server;
- (c) method of modifying an interactive application by server;
- (d) method of modifying a push application by server;
- (e) method of **generating** modified version of push application received from server through **transmission** medium by client.

USE - For application such as page to printer, note to pager, audio message to cellular phone, web page to internet enabled computer or palmtop, movie to television, ON-OFF command to switch of microwave oven, central air-conditioning system of house.

ADVANTAGE - The client can be ultra thin i.e. a low cost device,



with minimal computing power and **memory** capacity as the server has already adapted or modified the application for the client. Since the applications can be modified by the server to fit specific clients, the same content materials can be used for **different** clients. The development **time** to adapt **different** applications to new type of client can be significantly reduced.

DESCRIPTION OF DRAWING(S) - The figure shows the examples of appliance specific transducers.

pp; 38 DwgNo 4/9

Title Terms: INTERACT; **APPLY** ; MODIFIED; SYSTEM; CLIENT; SERVE; **APPLY**

Derwent Class: T01; W01

International Patent Class (Main): **G06F-013/00 ; G06F-013/38 ; H04L-012/28**

International Patent Class (Additional): **G06F-015/17 ; G06F-017/30**

File Segment: EPI

**21/5/12 (Item 4 from file: 350)**

DIALOG(R) File 350:Derwent WPIX

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012908580 **\*\*Image available\*\***

WPI Acc No: 2000-080416/200007

XRPX Acc No: N00-063681

Data **security enhancement unit for CD-ROM, DVD - sends out basic data at format corresponding to dummy data , based on dummy random number and count value, from respective generator and counter**

Patent Assignee: MEGACHIPS KK (MEGA-N)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 11328900	A	19991130	JP 98127276	A	19980511	200007 B

Priority Applications (No Type Date): JP 98127276 A 19980511

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 11328900	A	12	G11B-023/00	

Abstract (Basic): JP 11328900 A

NOVELTY - A **decoder** (52) **decodes the encoded data , based on key data (KD) generated by a generator (40). Key data is synthesized using basic data (S) stored in a memory (24). Basic data is then sent out at a format corresponding to dummy data , based on dummy random number (R) and count value (N), from respective generator (23) and counter (22). DETAILED DESCRIPTION - Encoded disc data recorded by a recording unit (5) is read by a reader (51). The basic data (S) corresponding to the key data is stored in the memory (24), based on demand signal (Q) from the generator (40). INDEPENDENT CLAIMS are also included for the following: drive unit of recording medium; semiconductor device**

USE - For CD-ROM, DVD.

ADVANTAGE - The need for incorporation of power supply is eliminated. Since **encoding** is done corresponding to the **time** sequential **target** , decipherment of communication **data** is prevented.

DESCRIPTION OF DRAWING(S) - The figure shows block diagram of recording medium. (5) Recording unit; (22) Counter; (23,40) **Generators ; (24)**

**Memory ; (51) Reader; (52) Decoder .**

Dwg.1/8

Title Terms: **DATA ; SECURE; ENHANCE; UNIT; CD; ROM; SEND ; BASIC; DATA ; FORMAT; CORRESPOND; DUMMY; DATA ; BASED; DUMMY; RANDOM; NUMBER; COUNT; VALUE; RESPECTIVE; GENERATOR ; COUNTER**

Derwent Class: T01; T03; W04

International Patent Class (Main): **G11B-023/00**

International Patent Class (Additional): **G06F-012/14 ; G11B-019/04 ;**

**G11B-023/30**

File Segment: EPI

21/5/13 (Item 5 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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012707596 \*\*Image available\*\*  
WPI Acc No: 1999-513705/199943  
XRPX Acc No: N99-383344

Digital satellite broadcast receiver with karaoke function for e.g.  
small-scale saloon - has switching device which deviates audio signal  
from decoder and analog audio signal from MPEG2 selectively, and  
supplies both signals to aural output terminal

Patent Assignee: DAIICHI KOSHO KK (DAII-N)  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 11224093	A	19990817	JP 9827298	A	19980209	199943 B

Priority Applications (No Type Date): JP 9827298 A 19980209

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 11224093	A	7	G10K-015/04	

Abstract (Basic): JP 11224093 A

NOVELTY - A switching device (SW1) selectively deviates the audio signal from a decoder (16) and the analog audio signal from an MPEG2 (22) and supplies both signals to an aural output terminal (25). An on-screen display circuit (17) derives the video image with character row of words from the decoder, based on the karaoke data read-out from the MPEG2, and supplies predetermined video to an output terminal (24). DETAILED DESCRIPTION - A cartridge interface circuit (21) stores the karaoke data and accompaniment music with words read-out from a karaoke cartridge (20) in digital format. The MPEG2 outputs the accompaniment music using the karaoke data, when a demand from the switching device and on-screen display is received by user input to an interface circuit (5).

USE - For small-scale saloon, restaurant and store.

ADVANTAGE - Offers space saving suitable for limited space e.g. store since large-scale CD-ROM player for karaoke video is not provided. Offers cost effectiveness since separate display and speaker is unnecessary. Offers labor saving by performing automatic fee collection and displaying the music selection directly without using table of contents book. Maintains reproduction of fresh video from external broadcasting station different each time. DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of the digital satellite broadcast receiver. (5) Interface circuit; (16) Decoder; (17) Display circuit; (20) Karaoke cartridge; (21) Cartridge interface circuit; (22) MPEG2; (24) Output terminal; (25) Aural output terminal; (SW1) Switching device.

Dwg.1/1

Title Terms: DIGITAL; SATELLITE; BROADCAST; RECEIVE; KARAOKE; FUNCTION;  
SMALL-SCALE; SALOON; SWITCH; DEVICE; DEVIATE; AUDIO; SIGNAL; DECODE;  
ANALOGUE; AUDIO; SIGNAL; SELECT; SUPPLY; SIGNAL; AURAL; OUTPUT;  
TERMINAL

Derwent Class: P86; W03

International Patent Class (Main): G10K-015/04

International Patent Class (Additional): H04N-005/44; H04N-005/445;

H04N-007/08; H04N-007/081

File Segment: EPI; EngPI

21/5/14 (Item 6 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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011214336 \*\*Image available\*\*  
WPI Acc No: 1997-192261/199717

XRPX Acc No: N97-158866

**Spatial light modulator for imaging applications - has array of mirror elements loading data for addressing of mirror elements with shift registers receiving one row of data at time and latches holding data on bit-lines which run down columns of array**

Patent Assignee: TEXAS INSTR INC (TEXI )

Inventor: BHUVA R L; CONNER J L; OVERLAUER M J; TOWNSON W R

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5612713	A	19970318	US 95369247	A	19950106	199717 B

Priority Applications (No Type Date): US 95369247 A 19950106

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 5612713	A	7	H04N-003/02	

Abstract (Basic): US 5612713 A

The light modulator includes an array of pixel- **generating** elements, with each individually addressable with **data** and an associated **memory** cell array **storing** the **data** . At least one bit-line is associated with each column of **memory** cells for delivery of **data** to that column. A row of shift registers receives row **data** for one row of the array from an external source for delivery to the **memory** cells. A row of latches receives the row **data** from the shift registers and holds it on the bit-lines.

A block load circuit is interposed between the latches and the **memory** cells and sequences delivery of the row **data** to a selected row of the **memory** cells by delivering a write signal to different blocks of the selected **memory** cell row. Each block receives the write signal at a **different time** . A row **decoder** delivers a row select signal to the block load circuit for selection of a **memory** cell row.

USE/ADVANTAGE - E.g. display and printing applications. High speed and efficient loading for increased **data** bandwidths. Sequencing loading in **time** prevents high current transients and increases noise immunity. Power bus can be narrower and reduced die layout area required.

Dwg.2/3

Title Terms: SPACE; LIGHT; MODULATE; IMAGE; **APPLY** ; ARRAY; MIRROR; ELEMENT ; LOAD; **DATA** ; ADDRESS; MIRROR; ELEMENT; SHIFT; REGISTER; RECEIVE; ONE; ROW; **DATA** ; **TIME** ; LATCH; HOLD; **DATA** ; BIT; LINE; RUN; DOWN; COLUMN; ARRAY

Index Terms/Additional Words: **DMD\_S** **LM**Sp atia l li ght ; SLM

Derwent Class: W04

International Patent Class (Main): **H04N-003/02**

File Segment: EPI

21/5/15 (Item 7 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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010552198 \*\*Image available\*\*

WPI Acc No: 1996-049151/199605

Related WPI Acc No: 1997-099683

XRPX Acc No: N96-041248

**Channel selection appts with fast forward, reverse and channel pause functions - transmits group of programs with same program source material and staggered starting times, and sets pointer to program within group to be decoded and displayed, according to special function selected by user**

Patent Assignee: BELL ATLANTIC NETWORK SERVICES (BELL-N)

Inventor: LEW E L; O'CALLAGHAN D

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5477263	A	19951219	US 94249572	A	19940526	199605 B

Priority Applications (No Type Date): US 94249572 A 19940526

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes  
US 5477263 A 16 H04N-007/173

Abstract (Basic): US 5477263 A

The appts includes a **memory** , containing a **data** structure with information identifying how to access each program of at least one group of programs of a number of programs. The group comprises the same program source material with staggered starting times offset by. . . . . respective numbers of **time** delay increments from a first program of the group. The **memory** also contains a pointer to the program of the group which should be **decoded** for presentation to the user.

A user control apparatus indicates program selection information and activates special functions. The pointer is changed to point to a program with a **different** starting **time** , in response to an indication from the user control apparatus, that the user requires a special function. The special function may be fast forward, reverse and pause.

USE/ADVANTAGE - E.g. in MPEG-2 **video** -on- **demand** system, CATV. Provides fast user channel change capability for compressed digital **data** input **stream** . Enables reception of **encrypted** programming from multichannel **stream** without delay. Provides VCR-like functionality.

Dwg.8/9

Title Terms: CHANNEL; SELECT; APPARATUS; FAST; FORWARD; REVERSE; CHANNEL; PAUSE; FUNCTION; **TRANSMIT** ; GROUP; PROGRAM; PROGRAM; SOURCE; MATERIAL; STAGGER; START; **TIME** ; SET; POINT; PROGRAM; GROUP; **DECODE** ; DISPLAY; ACCORD; SPECIAL; FUNCTION; SELECT; USER

Derwent Class: W02

International Patent Class (Main): **H04N-007/173**

File Segment: EPI

**21/5/16 (Item 8 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

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010410571 **\*\*Image available\*\***

WPI Acc No: 1995-311885/199541

Related WPI Acc No: 1995-256344

XRFX Acc No: N95-235653

**Magnetic disk data storage device with spiral tracks - has spiral patterns on opposite surfaces of disk spiralling in opposite directions and reads one surface as actuator sweeps in and other surface as actuator sweeps out**

Patent Assignee: INT BUSINESS MACHINES CORP (IBMC ); IBM CORP (IBMC )

Inventor: BROWN D H; CUNNINGHAM E A; GREENBERG R; OTTESEN H H; SMITH G J;

VANLEEUEWEN G W; BILLINGS R A; CUNNINGHAM B A; VAN LEEUWEN G W

Number of Countries: 010 Number of Patents: 014

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
CA 2138301	A	19950722	CA 2138301	A	19941215	199541 B
EP 701246	A2	19960313	EP 95480084	A	19950713	199615
JP 8063898	A	19960308	JP 95127677	A	19950526	199620
TW 270193	A	19960211	TW 94111744	A	19941215	199621
BR 9503412	A	19960521	BR 953412	A	19950724	199626
EP 701246	A3	19960605	EP 95480084	A	19950713	199632
US 5594924	A	19970114	US 94184417	A	19940121	199709
			US 94288525	A	19940810	
			US 95443838	A	19950518	
US 5619387	A	19970408	US 94184417	A	19940121	199720
			US 94288525	A	19940810	
			US 95444175	A	19950518	
			US 96689582	A	19960812	
US 5630104	A	19970513	US 94184417	A	19940121	199725
			US 94288525	A	19940810	
			US 95444116	A	19950518	

CN 1128386	A	19960807	CN 95104772	A	19950425	199750
CA 2138301	C	19981215	CA 2138301	A	19941215	199909
KR 218611	B1	19990901	KR 9524501	A	19950809	200104
JP 2002140864	A	20020517	JP 95127677	A	19950526	200237
			JP 2001215689	A	19950526	
CN 1359070	A	20020717	CN 95104772	A	19950425	200268
			CN 2001124475	A	19950425	

Priority Applications (No Type Date): US 94288525 A 19940810; US 94184417 A 19940121; US 95443838 A 19950518; US 95444175 A 19950518; US 96689582 A 19960812; US 95444116 A 19950518

Cited Patents: No-SR.Pub; 1.Jnl.Ref; CA 2138301; EP 664506; JP 1130375; JP 4102267; JP 62180540; JP 63268160; US 4107746; US 4636885; WO 9214249

#### Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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CA 2138301	A		54	G11B-007/09	
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EP 701246	A2	E	24	G11B-005/012	
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Designated States (Regional): DE FR GB

JP 8063898	A		22	G11B-020/12	
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TW 270193	A			G06K-001/00	
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BR 9503412	A			G11B-019/20	
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EP 701246	A3			G11B-007/09	
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US 5594924	A		21	G06F-009/312	CIP of application US 94184417
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					Div ex application US 94288525
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US 5619387	A		21	G11B-005/55	CIP of application US 94184417
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					Div ex application US 94288525
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					Cont of application US 95444175
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US 5630104	A		21	G06F-017/00	CIP of application US 94184417
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					Div ex application US 94288525
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CN 1128386	A			G11B-005/00	
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CA 2138301	C			G11B-020/12	
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KR 218611	B1			G11B-007/26	
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JP 2002140864	A		21	G11B-020/10	Div ex application JP 95127677
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CN 1359070	A			G06F-012/06	Div ex application CN 95104772
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Abstract (Basic): CA 2138301 A

The device comprises a first and a second magnetic recording surface located on a disk rotatably mounted on a spindle, and having an inner and an outer edge. A spindle motor rotates the disk in the predetermined direction. The first recording surface is formatted to contain a spiral **data** track spiralling inward from the outer edge. The second recording surface is formatted to contain a **data** track spiralling outward from the inner edge toward the outer edge of the disk.

A first and a second transducer is mounted on a movable actuator on each side of the disk for accessing **data** by following the spiral tracks. The patterns of the tracks on the two surfaces spiral in opposite direction. The **data stored** on the disk is pref. **multimedia data** which does not require a very low error rate.

USE/ADVANTAGE - Esp. storage of **multimedia data**, e.g. in **video on-demand** applications. Provides more efficient storage of large amount of **multimedia data** at reduced cost and at more suitable access speed.

Dwg.3a/9

Title Terms: MAGNETIC; DISC; **DATA**; STORAGE; DEVICE; SPIRAL; TRACK; SPIRAL; PATTERN; OPPOSED; SURFACE; DISC; SPIRAL; OPPOSED; DIRECTION; READ; ONE; SURFACE; ACTUATE; SWEEP; SURFACE; ACTUATE; SWEEP

Derwent Class: T03; W04

International Patent Class (Main): G06F-009/312; G06F-012/06;

G06F-017/00; G06K-001/00; G11B-005/00; G11B-005/012; G11B-005/55;

G11B-007/09; G11B-007/26; G11B-019/20; G11B-020/10; G11B-020/12

International Patent Class (Additional): G06F-003/06; G06F-009/455;

G06F-015/00; G11B-005/09; G11B-005/39; G11B-005/596; G11B-007/00

; G11B-021/10; H04N-005/781

File Segment: EPI

DIALOG(R)File 350:Derwent WPIX  
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008270658     \*\*Image available\*\*  
WPI Acc No: 1990-157659/199021  
XRPX Acc No: N90-122541

**High definition time multiplexed analog components TV system -  
filtering luminance components to produce interlaced luminance components  
fields having lines which is half original number of lines**

Patent Assignee: PHILIPS GLOEILAMPENFAB NV (PHIG )

Inventor: CAVALLERAN A P

Number of Countries: 006 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 369523	A	19900523	EP 89202819	A	19891108	199021 B
CA 2002818	A	19900514				199029
JP 2192377	A	19900730				199036
US 4992853	A	19910212	US 88271136	A	19881114	199109

Priority Applications (No Type Date): US 88271136 A 19881114

Cited Patents: 1.Jnl.Ref; A3...9129; NoSR.Pub; WO 8901273

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 369523	A				

Designated States (Regional): DE FR GB

Abstract (Basic): EP 369523 A

The **encoding** method comprises the steps of filtering luminance components to produce interlaced luminance component fields having a second number of lines which is one half times the given number of lines. The luminance components are subtracted to produce )interlaced line subtraction component fields having the second number of lines. Lines of the interlaced luminance component fields and the interlaced line subtraction component fields are processed in groups each group containing information from a multiplicity of lines, to **generate** a number of signal packets. The signal packets comprises a first filtered liminance component having a first **time** compression ratio and a second filtered luminance component having a second **time** compression ratio.

The second **time** compression ratio is **different** from the first **time** compression ratio and a number of line subtraction components are separate from first and second filtered luminance components. A **time** multiplexed line signal having a second line **period** greater than the first line **period** is **generated** by **time** multiplexing the signal packets in **time** slots. (14pp Dwg.No.9/10)

Title Terms: HIGH; DEFINE; **TIME** ; MULTIPLEX; ANALOGUE; COMPONENT;  
TELEVISION; SYSTEM; FILTER; LUMINOUS; COMPONENT; PRODUCE; INTERLACED;  
LUMINOUS; COMPONENT; FIELD; LINE; HALF; ORIGINAL; NUMBER; LINE

Derwent Class: W02

International Patent Class (Additional): H04N-007/00 ; H04N-011/00

File Segment: EPI

21/5/18     (Item 10 from file: 350)

DIALOG(R)File 350:Derwent WPIX  
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007311159  
WPI Acc No: 1987-308166/198744  
XRPX Acc No: N87-230544

**High-speed multi-execution unit uniprocessor system - has special purpose  
tag fields associated with general purpose registers to maintain records  
of use of registers by units execution**

Patent Assignee: INT BUSINESS MACHINES CORP (IBMC ); IBM CORP (IBMC )

Inventor: POMERENE J H; PUZAK T R; RECHTSCHAFFEN R N; SPARACIO F J;

RECHTSCHAF R N

Number of Countries: 004 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 243892	A	19871104	EP 87105990	A	19870424	198744 B
US 4903196	A	19900220	US 86859156	A	19860502	199014
EP 243892	B1	19940803	EP 87105990	A	19870424	199430
DE 3750306	G	19940908	DE 3750306	A	19870424	199435
			EP 87105990	A	19870424	

Priority Applications (No Type Date): US 86859156 A 19860502

Cited Patents: 2.Jnl.Ref; A3...9018; FR 2399693; No-SR.Pub; US 3346851; US 3718912; US 4574349

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 243892	A	E	27		
Designated States (Regional): DE FR GB					
US 4903196	A		23		
EP 243892	B1	E	110	G06F-009/38	
Designated States (Regional): DE FR GB					
DE 3750306	G			G06F-009/38	Based on patent EP 243892

Abstract (Basic): EP 243892 A

The uniprocessor system has N execution units to each of which each general purpose register (GPR) is accessible. A control mechanism of the system allows the N execution units to execute **concurrently** up to N instructions using the some general purpose registers sequentially or **different** general purpose registers **concurrently**. The four special purpose tag fields associated with each general purpose register are a SINK FORWARD TAG, a SINK EXECUTE TAG, and one or more SOURCE TAG-SOURCE COUNTER pair. An instruction register **store** associated with each execution unit has fields **storing** the instruction for execution and two or more special purpose fields **storing** an identification TAG unique to the execution unit and a SINK v SOURCE TAG.

The special purpose tag fields are loaded by a control mechanism in the execution units and general purpose registers during an instruction **decoding** phase of system operation. The chronological sequence of **requests** for use by any execution unit of a particular general purpose register in the SINK FORWARD TAG field is **stored**. The first execution unit is identified which must use the general purpose register as a immediately preceding use by a second execution unit in the units SINK v SOURCE TAG field. As the units execute their assigned tasks their chronological sequence of use of the general purpose register in the SINK EXECUTE TAG field is maintained.

ADVANTAGE - Logical integrity of **data**, used out of sequence relative to instructions **stream**, is ensured.

2/9

Title Terms: HIGH; SPEED; MULTI; EXECUTE; UNIT; SYSTEM; SPECIAL; PURPOSE; TAG; FIELD; ASSOCIATE; GENERAL; PURPOSE; REGISTER; MAINTAIN; RECORD; REGISTER; UNIT; EXECUTE

Derwent Class: T01

International Patent Class (Main): G06F-009/38

International Patent Class (Additional): G06F-015/00

File Segment: EPI

21/5/19 (Item 11 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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003728141

WPI Acc No: 1983-724337/198331

XRFX Acc No: N83-133234

Data processing appts. for pre-fetching instructions - predicts result of conditional branch instruction based on previous performance rather than instruction field

Patent Assignee: IBM CORP (IBMC )

Inventor: LOSQ J J; RAO G S; SACHAR H E

Number of Countries: 010 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 84114	A	19830727	EP 82111309	A	19821207	198331 B
ES 8403221	A	19840601				198429
US 4477872	A	19841016	US 82339561	A	19820115	198444
EP 84114	B	19860507				198619
DE 3271063	G	19860612				198625

Priority Applications (No Type Date): US 82339561 A 19820115

Cited Patents: 1.Jnl.Ref

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 84114	A	E	25		
Designated States (Regional): BE CH DE FR GB IT LI NL					
EP 84114	B	E			
Designated States (Regional): BE CH DE FR GB IT LI NL					

Abstract (Basic): EP 84114 A

The predictor mechanism is based on a history table, updated in accordance with whether previous execution of a given conditional branch instruction resulted in the branch being taken. When a conditional branch instruction is **decoded**, its address, **stored** in an address register accesses the history table, where the **stored** history determines the derivation of the address of the next instruction to be prefetched, if a compare circuit indicates a match, default criteria being used otherwise.

Preferably, if comparison is successful, logic provides the associated history bit from the table to an instruction fetch mechanism as an indication of whether the conditional branch instruction is predicted to be taken

Title Terms: **DATA** ; PROCESS; APPARATUS; PRE; FETCH; INSTRUCTION; PREDICT; RESULT; CONDITION; BRANCH; INSTRUCTION; BASED; PERFORMANCE; INSTRUCTION; FIELD

Derwent Class: T01

International Patent Class (Additional): **G06F-009/38**

File Segment: EPI



Set	Items	Description
S1	602315	CLIENT? OR VIEWER? OR USER? OR STANDALONE OR STAND()ALONE - OR PC OR PCS OR PERSONAL()COMPUTER? OR WORKSTATION? OR WORK()- STATION? OR NODE?
S2	915359	REQUEST? OR ASK OR ASKS OR ASKED OR ASKING OR PETITION? OR CALL() (ON OR UPON) OR QUER? OR QUESTION? OR INQUIR? OR DEMAND? OR REQUISITION OR APPLY OR APPLYING
S3	1999152	CAPTUR? OR MEMORY OR CACHE? OR STORE? ? OR STORING OR SAVE OR SAVING OR KEEP? ? OR KEEPING
S4	600112	(TV OR TELEVISION OR RADIO) () (SHOW? OR PROGRAM? OR BROADCA- ST?) OR MEDIA()ASSET? OR VIDEO? OR AUDIO? OR MULTIMEDIA OR ME- DIA
S5	3111402	TIME OR SCHEDULE? OR PERIOD OR DURATION OR SIMULTANEOUS? OR CONCURRENT?
S6	286682	ENCOD??? OR DECOD??? OR ENCRYPT??? OR CIPHER? OR CYPHER? OR DECRYPT? OR CYPHERTEXT OR ENCYPHER? OR UNCOD? OR UNENCRYPT? - OR ENCIPHER? OR UNCOD? OR DECIHER? OR UNCYPHER? OR UNCYPHER? - OR CYPTO?
S7	626997	PUBLISH? OR ISSUE OR DISPURS? OR DISTRIBUT?
S8	1991003	DIFFERENT OR ANOTHER OR SEPARATE OR TARGET
S9	4524626	TRANSFER? OR STREAM? OR SEND? OR TRANSMIT? OR TRANSMISSION OR GENERAT? OR PLAY? OR BROADCAST?
S10	295	S1 AND S2 AND S3 AND (S4 (3N) S5)
S11	4896886	S7 OR S9
S12	36068	S8 (3N) S5
S13	15831	S11 AND S12
S14	4	S10 AND S13
S15	760	S2 AND S3 AND (S4 (3N) S5)
S16	956	S13 AND S6
S17	0	S15 AND S16
S18	103	S15 AND S6
S19	83	S18 AND S11
S20	0	S19 AND S12
S21	0	S18 AND S12
S22	15024	S9 AND S12
S23	0	S19 AND S22
S24	12	S15 AND S22
S25	12	S14 OR S24
S26	11	S25 AND IC=(G06F? OR H04N? OR G11B?)

File 347:JAPIO Oct 1976-2003/Jan(Updated 030506)

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File 350:Derwent WPIX 1963-2003/UD,UM &UP=200334

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26/5/1 (Item 1 from file: 347)  
DIALOG(R)File 347:JAPIO  
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05632845 \*\*Image available\*\*  
VIDEO DATA MANAGEMENT DEVICE FOR VIDEO SERVER

PUB. NO.: 09-247645 [JP 9247645 A]  
PUBLISHED: September 19, 1997 (19970919)  
INVENTOR(s): YAMAGUCHI HIDEAKI  
HORIUCHI CHIHRO  
APPLICANT(s): TOSHIBA CORP [000307] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 08-054721 [JP 9654721]  
FILED: March 12, 1996 (19960312)  
INTL CLASS: [6] H04N-007/16 ; G06F-003/06 ; H04N-005/78 ; H04N-005/93  
  
JAPIO CLASS: 44.6 (COMMUNICATION -- Television); 42.5 (ELECTRONICS --  
Equipment); 45.3 (INFORMATION PROCESSING -- Input Output  
Units)  
JAPIO KEYWORD: R138 (APPLIED ELECTRONICS -- Vertical Magnetic &  
Photomagnetic Recording)

#### ABSTRACT

PROBLEM TO BE SOLVED: To reduce the cost per unit capacity of a storage medium by selectively utilizing a storage medium with a **different** mean seek **time** depending on the frequency of use of video data.

SOLUTION: A video server **stores** lots of video data and distributes the video data in response to a distribution **request**. A communication IF1 is connected to a network such as a LAN and **sends** /receives the video data with a distribution **request** party. Upon the receipt of a distribution **request** relating to the video data with a file name from the distribution **request** party via the communication IF1, a CPU 2 executes prescribed processing. Furthermore, the server is provided with a header table management means 4 and a storage data management means 5 **storing** and managing the video data into program- search header data and the video data main body separately, and the storage data management means 5 uses plural kinds of storage **media** whose mean seek **time** differs and properly selects any of the storage **media** whose mean seek **time** differs depending on the frequency of use of the video data to **store** the video data.

26/5/2 (Item 2 from file: 347)  
DIALOG(R)File 347:JAPIO  
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04258250 \*\*Image available\*\*  
PICTURE INPUT-OUTPUT DEVICE

PUB. NO.: 05-249950 [JP 5249950 A]  
PUBLISHED: September 28, 1993 (19930928)  
INVENTOR(s): YANAI NORIBUMI  
FUJITA MAKOTO  
KATSURA AKIHIRO  
FUKUNAGA YASUSHI  
APPLICANT(s): HITACHI LTD [000510] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 04-045775 [JP 9245775]  
FILED: March 03, 1992 (19920303)  
INTL CLASS: [5] G09G-005/36; G06F-003/153 ; G09G-005/00; H04N-007/15  
JAPIO CLASS: 44.9 (COMMUNICATION -- Other); 44.6 (COMMUNICATION --  
Television); 45.3 (INFORMATION PROCESSING -- Input Output  
Units)  
JOURNAL: Section: P, Section No. 1671, Vol. 18, No. 11, Pg. 36,  
January 10, 1994 (19940110)

ABSTRACT

PURPOSE: To input and output **different video signals simultaneously** to and from one frame **memory** by performing input-output to and from the frame **memory** of second data when a **transfer** period is assigned to a buffer.

CONSTITUTION: A frame **memory** 30 **stores** first and second data included in first and second video signals, and a buffer 80 **stores** the second data being input and output. A time indicating means 10 outputs a blanking period or an effective **period** of the first **video** signal as a timing signal. A time division control means 20, receiving a **request** for the assignment of **transfer** periods for inputting and outputting between the frame **memory** 30 and the buffer 80 for the second data outputs from the buffer 80, outputs a **transfer** permission to the buffer 80 in order to assign one side period out of informed periods by the time indicating means 10. The buffer 80 submits the **request** for the assignment of the **transfer** periods to the time division control means 20, and performs the input and output to and from the frame **memory** 3 of the second data, when the **transfer** periods are assigned.

26/5/3 (Item 1 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014880355 \*\*Image available\*\*

WPI Acc No: 2002-701061/200276

XRPX Acc No: N02-552691

**Video recording-reproduction system has controller which performs reading and writing operations with respect to pair of memories based on video recording-reproduction request from central processing unit**

Patent Assignee: NEC CORP (NIDE )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2002209170	A	20020726	JP 2001200	A	20010104	200276 B

Priority Applications (No Type Date): JP 2001200 A 20010104

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 2002209170	A		6 H04N-005/765	

Abstract (Basic): JP 2002209170 A

NOVELTY - A **memory** **stores** video recording **stream** data and another **memory** **stores** index information including title of a program, **video** recording **time**, amount of data etc., and related data of the program. A controller (14) performs reading and writing operations with respect to both the memories based on video recording-reproduction **request** from a central processing unit (12).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for video recording-reproduction method.

USE - Video recording-reproduction system.

ADVANTAGE - Since index information is **stored** in a **separate memory** the **time** required to search the index information is reduced. The **generation** of error in the reproduced data is suppressed.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of video recording-reproduction system. (Drawing includes non-English language text).

Central processing unit (12)

Controller (14)

pp; 6 DwgNo 1/6

Title Terms: VIDEO; RECORD; REPRODUCE; SYSTEM; CONTROL; PERFORMANCE; READ; WRITING; OPERATE; RESPECT; PAIR; **MEMORY** ; BASED; VIDEO; RECORD; REPRODUCE; **REQUEST** ; CENTRAL; PROCESS; UNIT

Derwent Class: T03; W04

International Patent Class (Main): H04N-005/765

International Patent Class (Additional): G11B-020/12 ; G11B-027/00 ;

H04N-005/76  
File Segment: EPI

26/5/4 (Item 2 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
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014436191 \*\*Image available\*\*  
WPI Acc No: 2002-256894/200230  
XRPX Acc No: N02-198874

Video cassette recorder sends request for recording video signals  
selected by subscriber, to central computer which instructs receiving  
unit to record requested video signals

Patent Assignee: LANGBERG M (LANG-I)

Inventor: LANGBERG M

Number of Countries: 096 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200195621	A1	20011213	WO 2001SE1314	A	20010608	200230 B
SE 200002163	A	20011209	SE 20002163	A	20000608	200230
AU 200174724	A	20011217	AU 200174724	A	20010608	200230

Priority Applications (No Type Date): SE 20002163 A 20000608

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200195621 A1 E 24 H04N-005/761

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA  
CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN  
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ  
PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

SE 200002163 A H04N-005/761

AU 200174724 A H04N-005/761 Based on patent WO 200195621

Abstract (Basic): WO 200195621 A1

NOVELTY - A network card connects VCR (1) to a global network. The VCR sends a request for recording subscriber selected video signals, to a central computer (6) which instructs a receiving unit (5) to record the requested video signals. The central computer instructs a local server (3) to receive recorded video signals from the receiving unit. The recorded video signals are transmitted from the local server to a television set.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for video signals recording and playing method.

USE - For recording and playing video signals such as TV programs, movies.

ADVANTAGE - By storing recorded video signals on a local server, the storage capacity becomes practically unlimited. It is possible to order a recording of several TV programs which are broadcast at the same time in different channels and to both record and play video signals at the same time. The video signals can be transferred to the VCR in a real time through the local network and high quality of the play can be guaranteed.

DESCRIPTION OF DRAWING(S) - The figure shows the system for recording and playing video signals.

VCR (1)

Local server (3)

Receiving unit (5)

Central computer (6)

pp; 24 DwgNo 1/4

Title Terms: VIDEO; CASSETTE; RECORD; SEND ; REQUEST ; RECORD; VIDEO;  
SIGNAL; SELECT; SUBSCRIBER; CENTRAL; COMPUTER; RECEIVE; UNIT; RECORD;  
REQUEST ; VIDEO; SIGNAL

Derwent Class: W04

International Patent Class (Main): H04N-005/761

File Segment: EPI

26/5/5 (Item 3 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
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014419346 \*\*Image available\*\*  
WPI Acc No: 2002-240049/200229  
XRPX Acc No: N02-185214

Streaming a single media track to multiple clients e.g. for computer systems, in which a track of media has associated metadata that provides timing, offset and other information  
Patent Assignee: SUN MICROSYSTEMS INC (SUNM ); BRITTENSON J (BRIT-I); NARASIMHAN A (NARA-I); PROCTOR S (PROC-I); SERGENT J S (SERG-I); SHAFER M (SHAF-I); SRIKANTAN G (SRIK-I)  
Inventor: BRITTENSON J; NARASIMHAN A; PROCTOR S; SERGENT J; SHAFER M; SRIKANTAN G; SERGENT J S

Number of Countries: 095 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200177870	A2	20011018	WO 2001US11137	A	20010406	200229 B
AU 200151353	A	20011023	AU 200151353	A	20010406	200229
US 20020056126	A1	20020509	US 2000195755	P	20000408	200235
			US 2001827866	A	20010406	
EP 1273152	A2	20030108	EP 2001924725	A	20010406	200311
			WO 2001US11137	A	20010406	

Priority Applications (No Type Date): US 2000195755 P 20000408; US 2001827866 A 20010406

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200177870 A2 E 28 G06F-017/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200151353 A G06F-017/00 Based on patent WO 200177870

US 20020056126 A1 H04N-007/173 Provisional application US 2000195755

EP 1273152 A2 E H04L-029/06 Based on patent WO 200177870

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

Abstract (Basic): WO 200177870 A2

NOVELTY - Method for **streaming** a media track to multiple clients using a single copy of the track's metadata, rather than making separate copies of the metadata for each **stream**. A media track's metadata includes information used to identify and locate **media** corresponding to **different time** positions in the track or media program. Sharing one copy of the metadata among multiple **client streams** promotes more efficient use of a media **streaming** server's resources. When a media track is first **requested**, a track object is **generated** to **store** and allow access to the metadata. For each **client stream**, a separate track handle object is created to manage access to the metadata for the **stream**'s specific context. The **streamed** media track may be part of a live media event or may be part of a pre-recorded media program.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: method using a single set of media metadata; computer readable storage medium; apparatus for **streaming** media

USE - For computer systems.

ADVANTAGE - Provides **streaming** of a media track to multiple clients with just one copy of the track metadata. Hence, this promotes more efficient use of a media **streaming** server's resources

DESCRIPTION OF DRAWING(S) - The diagram shows the use of a single

copy media track metadata to **stream** the media to multiple **clients**  
file track (212,214)  
audio track (202)  
video track (204)  
pp; 28 DwgNo 2/6  
Title Terms: **STREAM** ; SINGLE; MEDIUM; TRACK; MULTIPLE; **CLIENT** ; COMPUTER;  
SYSTEM; TRACK; MEDIUM; ASSOCIATE; TIME; OFFSET; INFORMATION  
Derwent Class: T01  
International Patent Class (Main): **G06F-017/00** ; H04L-029/06;  
**H04N-007/173**  
International Patent Class (Additional): **H04N-007/24**  
File Segment: EPI

26/5/6 (Item 4 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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014141680 \*\*Image available\*\*  
WPI Acc No: 2001-625891/200172  
Related WPI Acc No: 2001-663307  
XRPX Acc No: N01-466569

**Computer implemented method for displaying interactive media content  
displaying simultaneously real time media presentation and web page  
on different portions of display**  
Patent Assignee: YAHOO! (YAH0-N); YAHOO INC (YAH0-N)  
Inventor: BURRIS D; BUSHMAN B; JACOBY R; LINOWES S; MADISON J; SOHN H H;  
SPEAKS J J; SRINIVASAN A; BUSCHMANN B  
Number of Countries: 094 Number of Patents: 003  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200167223	A1	20010913	WO 2001US7388	A	20010307	200172 B
AU 200149112	A	20010917	AU 200149112	A	20010307	200204
US 20020091762	A1	20020711	US 2000187683	P	20000307	200248
			US 2000198713	P	20000420	
			US 2001801439	A	20010307	

Priority Applications (No Type Date): US 2000198713 P 20000420; US  
2000187683 P 20000307; US 2001801439 A 20010307

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200167223	A1	E	47	G06F-003/00	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
AU 200149112	A			G06F-003/00	Based on patent WO 200167223
US 20020091762	A1			G06F-015/16	Provisional application US 2000187683

Provisional application US 2000198713

Abstract (Basic): WO 200167223 A1

NOVELTY - The method involves receiving a data **stream** from a first server system over a network connection. The data **stream** includes a first data portion corresponding to a real **time media** presentation and a second data portion identifying data for a related web page **stored** on a second server system. The first data portion is processed to produce the real **time media** presentation. The web page data is automatically retrieved from the second server system.

DETAILED DESCRIPTION - The method further involves **sending** a **request** to the first server system identifying the data **stream** in response to a **user** selection of the real **time media** presentation

The real **time media** presentation and the web page are **simultaneously** displayed on **different** portions of a display.

INDEPENDENT CLAIMS are included for an information display system

and for a computer-readable medium.

USE - For displaying **media** content, especially real- **time media** content with **simultaneous** interactive display of related text and reference information.

ADVANTAGE - Allows **user** to view **simultaneously** real- **time media** content and online information that is related or unrelated to the media content.

DESCRIPTION OF DRAWING(S) - The figure shows an information retrieval and communication network for communicating media content.

pp; 47 DwgNo 2/6

Title Terms: COMPUTER; IMPLEMENT; METHOD; DISPLAY; INTERACT; MEDIUM;

CONTENT; DISPLAY; SIMULTANEOUS; REAL; TIME; MEDIUM; PRESENT; WEB; PAGE; PORTION; DISPLAY

Derwent Class: T01

International Patent Class (Main): G06F-003/00 ; G06F-015/16

International Patent Class (Additional): G06F-013/00

File Segment: EPI

26/5/7 (Item 5 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013531402 \*\*Image available\*\*

WPI Acc No: 2001-015608/200102

XRPX Acc No: N01-011886

**Multimedia data retrieving system e.g. multimedia server has scheduler to determine group of streams for which block is to be read in next sweep of the reader**

Patent Assignee: KONINK PHILIPS ELECTRONICS NV (PHIG )

Inventor: COUMANS P F A; KORST J H M

Number of Countries: 022 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200057635	A1	20000928	WO 2000EP1888	A	20000306	200102 B
EP 1080577	A1	20010307	EP 2000909311	A	20000306	200114
			WO 2000EP1888	A	20000306	
KR 2001043758	A	20010525	KR 2000713124	A	20001122	200168
US 6477541	B1	20021105	US 2000531943	A	20000321	200276
JP 2002540545	W	20021126	JP 2000607406	A	20000306	200307
			WO 2000EP1888	A	20000306	

Priority Applications (No Type Date): EP 99200897 A 19990323

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200057635 A1 E 25 H04N-005/00

Designated States (National): JP KR

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU

MC NL PT SE

EP 1080577 A1 E H04N-005/00 Based on patent WO 200057635

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI

LU MC NL PT SE

KR 2001043758 A H04N-005/00

US 6477541 B1 G06F-017/30

JP 2002540545 W 34 G11B-020/10 Based on patent WO 200057635

Abstract (Basic): WO 200057635 A1

NOVELTY - Data blocks retrieved as maximum and minimum bit rate **streams** from a storage medium (110) are supplied to **users**. A reader (180) sweep reads the data blocks and **stores** it in **different** buffers. A **scheduler** (170) determines group of the **streams** for which block is to be read in next sweep of the reader. The scheduler is operative to determine to service a low bit rate **stream** less than a high bit rate **stream**.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of retrieving blocks of multimedia data.

USE - In e.g. multimedia server for near-video-on- **demand** system

and video-on- **demand** system.

ADVANTAGE - By servicing the **stream** of low bit rate less often, the relative contribution of the switch time becomes smaller and the disk is being used more efficiently. Reduces **memory** required to implement the buffers for the **stream**.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of data retrieving system.

Storage medium (110)

Scheduler (170)

Reader (180)

pp; 25 DwgNo 1/5

Title Terms: DATA; RETRIEVAL; SYSTEM; SERVE; DETERMINE; GROUP; **STREAM** ;  
BLOCK; READ; SWEEP; READ

Derwent Class: T03; W02; W04

International Patent Class (Main): **G06F-017/30** ; **G11B-020/10** ;

**H04N-005/00**

International Patent Class (Additional): **G11B-027/00** ; **H04N-005/92** ;

**H04N-005/93**

File Segment: EPI

26/5/8 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013108031 \*\*Image available\*\*

WPI Acc No: 2000-279902/200024

XRPX Acc No: N00-211245

**Video data communication unit for video network, has transducer to convert format of data received through interface to different format suitable for video applications.**

Patent Assignee: CANON KK (CANO )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2000078557	A	20000314	JP 98245947	A	1998083	200024 B

Priority Applications (No Type Date): JP 98245947 A 19980831

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 2000078557	A	14	H04N-007/173	

Abstract (Basic): JP 2000078557 A

NOVELTY - The format of data received through interface (106) is judged, initially. If format is **different** from the real **time** usage format, then a video data format transducer (105) converts it to a format suitable for video applications (102-104).

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) video data communication procedure;

(b) recording medium for **storing** data communication program .

USE - For video network system.

ADVANTAGE - Reduces hardware scale by utilizing small real **time** **video** transducer. Since data can be delivered by **broadcast** using suitable format conversion, the load of server is reduced remarkably.

DESCRIPTION OF DRAWING(S) - The figure shows components of video data receiver.

Video applications (102-104)

Video data format transducer (105)

Interface (106)

pp; 14 DwgNo 1/16

Title Terms: VIDEO; DATA; COMMUNICATE; UNIT; VIDEO; NETWORK; TRANSDUCER;  
CONVERT; FORMAT; DATA; RECEIVE; THROUGH; INTERFACE; FORMAT; SUIT; VIDEO;

**APPLY**

Derwent Class: W02

International Patent Class (Main): **H04N-007/173**

International Patent Class (Additional): **H04N-007/24**



File Segment: EPI

26/5/9 (Item 7 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
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010433163 \*\*Image available\*\*  
WPI Acc No: 1995-334483/199543  
XRPX Acc No: N95-250726

Video server transferring real-time video signal - has  
communication controller for storing and deleting video data from  
packet through transmission line and recursive installation which reads  
copy of video signal recursive packet based on demand of user  
Patent Assignee: MATSUSHITA DENKI SANGYO KK (MATU )  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 7231321	A	19950829	JP 9422648	A	19940221	199543 B

Priority Applications (No Type Date): JP 9422648 A 19940221

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 7231321	A	11	H04L-012/28	

Abstract (Basic): JP 7231321 A

The server (VS1) retrieves video data from a data input unit (30) which, in turn, is divided in an internal data domain of a communication packet. A communication controller (20) stores or deletes video data from a packet through a high-speed transmission line (10).

According to a demand of a user, the copy of the recursive packet of a video signal is sent out to a local area network (2) that is being read out by a recursive installation (50).

USE/ADVANTAGE - High-speed access and transfer. Ensures only required video data are produced on selected target. Performs time division of packet sequence which stores continuous video data. Allows patrolling of each high-speed transmission line.

Dwg.1/15

Title Terms: VIDEO; SERVE; **TRANSFER**; REAL-TIME; VIDEO; SIGNAL;  
COMMUNICATE; CONTROL; STORAGE; DELETE; VIDEO; DATA; PACKET; THROUGH;  
**TRANSMISSION**; LINE; RECURSIVE; INSTALLATION; READ; COPY; VIDEO; SIGNAL;  
RECURSIVE; PACKET; BASED; **DEMAND**; **USER**

Derwent Class: W01; W02

International Patent Class (Main): H04L-012/28

International Patent Class (Additional): H04N-007/173

File Segment: EPI

26/5/10 (Item 8 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
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010121040 \*\*Image available\*\*  
WPI Acc No: 1995-022291/199503  
XRPX Acc No: N95-017414

Computer system with synchronised timing for multimedia presentations -  
has storage for multimedia objects with display and clock object with  
current time obtained externally with processor for synchronisation

Patent Assignee: TALIGENT INC (TALI-N)

Inventor: DENMAN M; TOBIAS J C; DENMAN M L

Number of Countries: 002 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9427235	A1	19941124	WO 94US260	A	19940106	199503 B
AU 9465321	A	19941212	AU 9465321	A	19940106	199522
US 5530859	A	19960625	US 9360150	A	19930510	199631

Priority Applications (No Type Date): US 9360150 A 19930510

Cited Patents: 2.Jnl.Ref; EP 239884

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9427235	A1	E	39	G06F-015/403	
AU 9465321	A			G06F-015/403	Based on patent WO 9427235
US 5530859	A		38	G06F-009/44	

Abstract (Basic): WO 9427235 A

The computer system comprises a storage (14,16) and a display (38) with a clock object and an associated current time, resident in the storage and able to be displayed on the display. Multiple multimedia objects are resident in the storage and also displayable. A musical instrument digital interface data object is provided and a processor (10) for synchronising the multimedia objects.

The processor initiates the synchronisation through aniconic operation. The synchronising process is initiated by a single or double clicking on the clock object. The processor may drop launch the synchronisation. The granularity of the synchronisation may also be adjusted. An external arrangement obtains the current time and the time may be forced to proceed backwards.

USE/ADVANTAGE - system is able to produce aesthetic presentation by correctly synchronising events. clock objects can be hidden when their linkages are defined.

Dwg.1/37

Title Terms: COMPUTER; SYSTEM; SYNCHRONISATION; TIME; PRESENT; STORAGE; OBJECT; DISPLAY; CLOCK; OBJECT; CURRENT; TIME; OBTAIN; EXTERNAL; PROCESSOR; SYNCHRONISATION

Derwent Class: T01; W04

International Patent Class (Main): G06F-009/44 ; G06F-015/403

File Segment: EPI

26/5/11 (Item 9 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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008808939 \*\*Image available\*\*

WPI Acc No: 1991-312952/199143

Related WPI Acc No: 1989-292720; 1990-209981; 1991-193467; 1991-193468; 1991-193469; 1991-238519; 1991-267399; 1991-280947; 1991-310770; 1991-310771; 1992-217330; 1992-217349; 1992-349503; 1992-349516; 1993-264945; 1994-007879; 1994-007881; 1994-117916; 1994-182834

XRPX Acc No: N91-239867

**Cable TV jammer preventing reception of unauthorised channels - places jamming signal near video carrier during one time slot, and between video and audio carriers at another**

Patent Assignee: SCIENTIFIC-ATLANTA INC (SCAT ); SCIENTIFIC ATLANTA INC (SCAT )

Inventor: WEST L E

Number of Countries: 003 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2243275	A	19911023	GB 913236	A	19910215	199143 B
CA 2036348	A	19910822				199145
US 5287539	A	19940215	US 88166302	A	19880310	199407
			US 90483451	A	19900221	
GB 2243275	B	19940615				199421
CA 2036348	C	19960611	CA 2036348	A	19910214	199635

Priority Applications (No Type Date): US 90483451 A 19900221; US 88166302 A 19880310

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5287539	A		22	H04K-003/00	CIP of application US 88166302 CIP of patent US 4912760

-GB 2243275 B H04H-001/02  
CA 2036348 C H04N-007/16

Abstract (Basic): GB 2243275 A

Off premises cable television interdiction appts. comprises a microprocessor actuation and controller (300) for actuating and controlling at least one frequency agile voltage controlled oscillator (341-344). The voltage controlled oscillator selectively jams only unauthorised premium programming **transmitted** in the clear from a headened to a particular subscriber. The voltage controlled oscillator **generates** a jamming signal carrier at a frequency  $1/N$  between the video and audio carriers where N is an integer, pref. small but greater than one.

The microprocessor provides a calibration mode and a normal mode of operation. During the normal mode of operation, a frequency hopping rate of the order of four thousand hertz is achievable. The method of interdiction comprises the steps of **generating** and **storing** voltage control words for operating the oscillator consistent with a headened selected jamming factor for a partic. channel to be jammed and addressably **transmitted** and **stored** premium programming authorisation data.

ADVANTAGE - In addition to jamming audio carrier, technique enhances picture jamming by placing jamming signal near **video** carrier during one **time** slot and between **video** and **audio** carriers at **another time** slot. This makes would-be pirate's job more difficult.  
(44pp Dwg.No.3/7)X

Title Terms: CABLE; TELEVISION; JAMMING; PREVENT; RECEPTION; UNAUTHORISED;  
CHANNEL; PLACE; JAMMING; SIGNAL; VIDEO; CARRY; ONE; TIME; SLOT; VIDEO;  
AUDIO; CARRY

Derwent Class: W02

International Patent Class (Main): H04H-001/02; H04K-003/00; **H04N-007/16**

File Segment: EPI

Set	Items	Description
S1	368978	CLIENT? OR VIEWER? OR USER? OR STANDALONE OR STAND()ALONE - OR PC OR PCS OR PERSONAL()COMPUTER? OR WORKSTATION? OR WORK()- STATION? OR NODE?
S2	1620044	REQUEST? OR ASK OR ASKS OR ASKED OR ASKING OR PETITION? OR CALL() (ON OR UPON) OR QUER? OR QUESTION? OR INQUIR? OR DEMAND? OR REQUISITION OR APPLY OR APPLYING
S3	622231	CAPTUR? OR MEMORY OR CACHE? OR STORE? ? OR STORING OR SAVE OR SAVING OR KEEP? ? OR KEEPING
S4	254853	(TV OR TELEVISION OR RADIO) () (SHOW? OR PROGRAM? OR BROADCA- ST?) OR MEDIA()ASSET? OR VIDEO? OR AUDIO? OR MULTIMEDIA OR ME- DIA
S5	985577	TIME OR SCHEDULE? OR PERIOD OR DURATION OR SIMULTANEOUS? OR CONCURRENT?
S6	183948	ENCOD??? OR DECOD??? OR ENCRYPT??? OR CIPHER? OR CYPHER? OR DECRYPT? OR CYPHERTEXT OR ENCRYPT? OR UNCOD? OR UNENCRYPT? - OR ENCIPHER? OR UNCOD? OR DECIHER? OR UNCYPHER? OR UNCYPHER? - OR CYPTO?
S7	1601108	PUBLISH? OR ISSUE OR DISPURS? OR DISTRIBUT?
S8	1296099	DIFFERENT OR ANOTHER OR SEPARATE OR TARGET
S9	1125335	TRANSFER? OR STREAM? OR SEND? OR TRANSMIT? OR TRANSMISSION OR GENERAT? OR PLAY? OR BROADCAST?
S10	596	S1 (S) S2 (S) S3 (S) (S4 (3N) S5)
S11	1848047	S7 OR S9
S12	88850	S8 (3N) S5
S13	27929	S11 (S) S12
S14	52	S10 (S) S13
S15	30	S14 (S) S6
S16	25	S15 AND IC=(G06F? OR H04N? OR G11B?)

File 348:EUROPEAN PATENTS 1978-2003/May W04  
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File 349:PCT FULLTEXT 1979-2002/UB=20030529,UT=20030522  
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16/5,K/1 (Item 1 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
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01313485

**Communication system with multicarrier telephony transport**  
**Kommunikationssystem mit Mehrtragertelefonubertagbarkeit**  
**Systeme de communication de transmission telephonique a porteuses multiples**  
**PATENT ASSIGNEE:**

ADC Telecommunications, Inc., (697353), 12501 Whitewater Drive,  
Minnetonka, MN 55343, (US), (Applicant designated States: all)

**INVENTOR:**

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PATENT (CC, No, Kind, Date): EP 1122650 A2 010808 (Basic)  
EP 1122650 A3 020116

APPLICATION (CC, No, Date): EP 2001201516 970124;

PRIORITY (CC, No, Date): US 10497 960124; US 10506 960124; US 673002 960628  
; US 650408 960520

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU;  
MC; NL; PT; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 882268 (EP 97903135)

INTERNATIONAL PATENT CLASS: G06F-017/14 ; H04L-001/00; H04L-001/24;  
H04L-005/02; H04L-005/14; H04L-012/10; H04L-012/12; H04L-012/26;  
H04L-012/28; H04L-012/44; H04L-027/26; H04M-007/00; H04L-027/34;  
H04L-025/03

ABSTRACT EP 1122650 A2

A communication system includes a hybrid fibre/coax distribution  
network. A head end generates a master clock signal and derives a head

end RF clock signal locked in frequency to the master clock signal. A head end symbol clock signal is derived, locked in frequency to the master clock signal, and multiple strings of downstream digital data are converted to sequences of symbols at times determined by the symbol clock signal. The symbols are modulated onto multiple orthogonal carriers having frequencies determined by the RF clock signal. The modulated orthogonal downstream carriers are transmitted over the distribution network to remote locations.

ABSTRACT WORD COUNT: 101

NOTE:

Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 010808 A2 Published application without search report  
Change: 010919 A2 Inventor information changed: 20010801  
Change: 020116 A2 International Patent Classification changed: 20011128

Search Report: 020116 A3 Separate publication of the search report  
Change: 020717 A2 Inventor information changed: 20020524

Examination: 020918 A2 Date of request for examination: 20020716

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200132	713
SPEC A	(English)	200132	79700
Total word count - document A			80413
Total word count - document B			0
Total word count - documents A + B			80413

INTERNATIONAL PATENT CLASS: G06F-017/14 ...

...SPECIFICATION patterns in the payload channels. Data is the payload channels can be scrambled with pseudorandom sequences, and **different** sequences can be applied to different channels in order to produce a more balanced multicarrier spectrum.

In...employ other modulation and mixing schemes or techniques to shift the video signals in frequency, and other **encoding** methods to transmit the information in a coded format. Such techniques and schemes for transmitting analog video...103 is calculated and a parity bit inserted as the tenth bit of the upstream DS0+ for **decoding** and identification by the HDT 12 of an error in the upstream data. If an error is...to the ISUs 100. The 10th bit or data integrity bit inserted in the downstream channels is **decoded** and checked at the ISU and utilized to calculate and generate a parity bit for corresponding channels...hand, wants a large degree of data integrity. In addition. it may be desirable to allow a **user** to select -- and pay for -- whatever degree of error correction that he desires. CTSU 54, Figure 3...

...the entry may also specify no correction, in which case message blocks do not apply. Step 4413 **encodes** the table entry in an IOC message and sends it to the ISU whose address appears in that row of table 4111. A general-purpose processor in CXSU 102 of the ISU **stores** the frame length in step 4414. As the CXSU receives data from modem 101, Figure 8, it **decodes** the frames of an entire message, 4415, then **decodes** the check symbols for the message, 4416, and signals an error, 4417, if one exists in the message. Steps 4415-4417 repeat for subsequent messages. The ISU employs the same process to **send** frames upstream to the head end, using the frame length setting specified in step 4414.

Within both...

16/5,K/2 (Item 2 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
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00746653

MULTI-CAST DIGITAL VIDEO DATA SERVER USING SYNCHRONIZATION GROUPS

SERVER FUR DIGITALE VEIODATEN FUR EINE VIELZahl VON ANWENDERN IN  
SYNCHRONGRUPPEN

SERVEUR MULTIDESTINATAIRE DE DONNEES VIDEO NUMERIQUES UTILISANT DES GROUPES  
DE SYNCHRONISATION

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PATENT (CC, No, Kind, Date): EP 764381 A1 970326 (Basic)  
EP 764381 B1 990506  
WO 9534169 951214

APPLICATION (CC, No, Date): EP 95922236 950606; WO 95US7199 950606

PRIORITY (CC, No, Date): US 255014 940607

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS: H04N-007/173

NOTE:

No A-document published by EPO

LEGAL STATUS (Type, Pub Date, Kind, Text):

Oppn None: 20000426 B1 No opposition filed: 20000208  
Application: 960327 A International application (Art. 158(1))  
Application: 970326 A1 Published application (A1with Search Report  
;A2without Search Report)  
Examination: 970326 A1 Date of filing of request for examination:  
970102  
Examination: 971229 A1 Date of despatch of first examination report:  
971111  
Change: 980715 A1 Title of invention (German) (change)  
Change: 980715 A1 Title of invention (English) (change)  
Change: 980715 A1 Title of invention (French) (change)  
Grant: 990506 B1 Granted patent

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9918	1710
CLAIMS B	(German)	9918	1608
CLAIMS B	(French)	9918	1955
SPEC B	(English)	9918	8943
Total word count - document A			0
Total word count - document B			14216
Total word count - documents A + B			14216

INTERNATIONAL PATENT CLASS: H04N-007/173

...SPECIFICATION In accordance with an aspect of this invention, a system  
is provided for distributing selected real-time, **encoded**, compressed,  
digital video data on demand to one or more display systems for viewing  
by viewers, each...

...the display of the video data to each viewer. It comprises a storage  
capability for storing the **encoded**, compressed, digital video data, the  
data being grouped into distinct programs, each program consisting of  
multiple frames, the storage mechanism allowing multiple, **concurrent**  
access to **different** frames within any given program. A high-speed  
server is provided to selectively retrieve frames of **viewer - requested**  
programs from the storage mechanism. One or more network interfaces is  
provided to accept the frames from the server, replicate the frames a  
selected number of times, one copy being for each **viewer** selecting the  
transmission of a particular program within a predetermined amount of  
time of other **viewers**, and to format the frames into **transmission**  
packets for **distribution** to the **viewers**.

In accordance with another aspect of the invention, a method is described for distributing selected real-time...

16/5,K/3 (Item 3 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
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00624129

**Recording and reproducing apparatus.**

**Aufzeichnungswiedergabegerat.**

**Appareil d'enregistrement et de reproduction.**

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PATENT (CC, No, Kind, Date): EP 609013 A2 940803 (Basic)  
EP 609013 A3 951129

APPLICATION (CC, No, Date): EP 94300402 940119;

PRIORITY (CC, No, Date): JP 938596 930121; JP 9392219 930325; JP 93107423  
930409; JP 93205682 930727; JP 93297504 931102; JP 93314114 931119

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC;  
NL; PT; SE

INTERNATIONAL PATENT CLASS: G11B-013/04 ; G11B-020/10 ; G11B-019/28 ;  
G11B-020/18 ; G11B-021/02 ; G11B-023/00 ; G11B-023/36

ABSTRACT EP 609013 A2

A disk-shaped recording medium (2) includes a transparent substrate (5), and an optical recording layer (4) and a magnetic recording layer (3) formed at one side of the transparent substrate (5). An optical head (6) applies light to the optical recording layer (4) from a light source via the transparent substrate, and focuses the light on the optical recording layer and reproduces information from the optical recording layer. A magnetic head (8) records information on the magnetic recording layer (3) or reproduces information from the magnetic recording layer. An optical head moving device (24,23) serves to move the optical head by a movement amount so as to focus the light on an optical track on the optical recording layer which has specified address information. A magnetic head moving device (20,21,22) serves to move the magnetic head to a specified magnetic track on the magnetic recording layer by referring to the movement amount of the optical head. (see image in original document)

ABSTRACT WORD COUNT: 163

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 940803 A2 Published application (Alwith Search Report  
;A2without Search Report)

Examination: 940803 A2 Date of filing of request for examination:  
940127

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states:

AT;BE;CH;DE;DK;ES;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT  
;SE)

Search Report: 951129 A3 Separate publication of the European or  
International search report  
Examination: 970903 A2 Date of despatch of first examination report:  
970722  
Withdrawal: 981223 A2 Date on which the European patent application  
was deemed to be withdrawn: 980626

LANGUAGE (Publication,Procedural,Application): English; English; English  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF2	3380
SPEC A	(English)	EPABF2	73994
Total word count - document A			77374
Total word count - document B			0
Total word count - documents A + B			77374

INTERNATIONAL PATENT CLASS: G11B-013/04 ...

... G11B-020/10 ...

... G11B-019/28 ...

... G11B-020/18 ...

... G11B-021/02 ...

... G11B-023/00 ...

... G11B-023/36

...SPECIFICATION forward light by the polarization beam splitter 55,  
traveling through the polarization beam splitter 55 and entering **another**  
polarization beam splitter 56. The reflected light is divided by the  
polarization beam splitter 56 into two...

...head circuit 39 and the optical reproducing 38 and being subjected to  
error correction by an ECC **decoder** 36. As a result, the original  
digital signal is recovered from the reproduced signal. The recovered  
original digital signal is fed to an output section 33. The output  
section 33 is provided with a **memory** which **stores** a quantity of the  
recorded signal (the recorded information) which corresponds to a given  
interval of time. In the case where the **memory** 34 consists of a 1-Mbit  
IC **memory** and a compressed **audio** signal having a bit rate of 250 kbps  
is handled, a quantity of the recorded signal which corresponds to a time  
of about 4 seconds can be **stored**. In the case of an audio player, if  
the optical head 6 moves out of tracking by...

...to an output section 13 at a final stage. In the case where the  
reproduced signal represents **audio** information, the reproduced signal  
is subjected to PCM demodulation before being outputted to an external  
device as...

...transmitted to an input section 21A of the magnetic recording block 9,  
being subjected by the ECC **encoder** 35 in the optical recording block 7  
to a coding process such as an error correcting process...

16/5,K/19 (Item 16 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT  
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00737987 \*\*Image available\*\*

GLOBALLY TIME-SYNCHRONIZED SYSTEMS, DEVICES AND METHODS  
SYSTEMES GLOBALEMENT SYNCHRONISES DANS LE TEMPS

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Patent and Priority Information (Country, Number, Date):  
Patent: WO 200050974 A2-A3 20000831 (WO 0050974)  
Application: WO 2000US5093 20000228 (PCT/WO US0005093)  
Priority Application: US 99258573 19990226; US 2000513601 20000225  
Parent Application/Grant:  
Related by Continuation to: US Not furnished (CIP)  
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK  
DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ  
TM TR TT TZ UA UG US UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM  
Main International Patent Class: G06F-017/60  
Publication Language: English  
Filing Language: English  
Fulltext Availability:  
Detailed Description  
Claims  
Fulltext Word Count: 80968

#### English Abstract

A system and method of fairly and securely enabling time-constrained competitions over the Internet (190) among millions of competitors compensates for the variable network latencies experienced by client machines (160) used by the competitors. The system employs globally time synchronized Internet information servers and client machines in order to synchronize the initial display of each invitation to respond (e.g. stock price to buy or sell, query to answer, or problem to solve) on a client machine so each competitor can respond to the invitation at substantially the same time, regardless of location, or the type of Internet connection used by the client. By using globally time synchronized client machines (160), each competitor's response is securely time and space stamped at the client machine to ensure that competitor responses are resolved within microsecond accuracy.

#### French Abstract

La presente invention concerne un systeme et un procede ameliores permettant d'organiser de facon equitable et sure des concours restreints dans le temps entre des millions de participants via Internet, tout en compensant les temps d'attente variables des communications reseau subis par les machines clientes utilisees par les participants. Ce systeme utilise des serveurs d'informations Internet et des machines clientes globalement synchronises dans le temps en vue de synchroniser l'affichage initial de chaque invitation a repondre (par exemple, des titres a acheter ou a vendre, une requete de reponse, ou un probleme a resoudre) sur une machine cliente, de sorte que chaque participant puisse repondre a l'invitation presque au meme moment, quel que soit l'endroit ou il se trouve, ou le type de connexion Internet utilisee par sa machine cliente. De meme, en utilisant des machines clientes globalement synchronisees dans le temps, la reponse de chaque participant est estampillee de facon sure avec l'heure et le lieu par la machine cliente, afin de garantir que les reponses des participants soient traitees avec une precision de l'ordre de la microseconde.

Legal Status (Type, Date, Text)

Publication 20000831 A2 Without international search report and to be republished upon receipt of that report.

Search Rpt 20001207 Late publication of international search report

Search Rpt 20001207 Late publication of international search report

Examination 20010705 Request for preliminary examination prior to end of 19th month from priority date

Correction 20020829 Corrected version of Pamphlet: pages 1-151, description, replaced by new pages 1-130; pages 152-237, claims, replaced by new pages 131-207; pages 1/101-101/101, drawings, replaced by new pages 1/101-101/101; due to late transmittal by the receiving Office

Republication 20020829 A3 With international search report.

Main International Patent Class: **G06F-017/60**

Fulltext Availability:

Claims

Claim

... operation of the contest, the real-time video compositor 920 sends the final video signal to standard **broadcasting** equipment 930, which **transmits** the video signal to the spectators television sets 940 via cable, satellite, and/or radio waves. Contest-Promoting System Of The Present Invention Employing Television Based **Client** Machines

The system components shown in Figs. 7 and 7A and described hereinabove enable spectators to passively...

...system components are provided to enable contestants to actively participate in the contest through a television-based **client** machine. As shown in FIGS. 8 and 8A, a television-based **client** machine 970 in accordance with the present invention comprises the following the components: a set-top **client** machine 970; a IR-based remote-control input device 980; and a standard television set 990. As shown, the set-top **client** machine 970 is connected to the **user** 's television set 990 using a standard NTSC or PAL cable. In addition, the set top **client** machine 970 has connections to an antenna or cable, as well as to the Internet using a modem 976 over a telephone line to an internet service provider. The set-top **client** machine 970 receives and processes contest data, including queries through both the modem as well as through...

...will contain live video in standard format,

Page 86 of 238

and could optionally contain additional data **broadcast** during the vertical blanking interval, perhaps using the IntercaStM format.

As shown in FIG. 12A, the set-top **client** machine 970 comprises a number of major components, namely: a GSU 175 or enhanced GSU 17; clock and timer hardware 290; a television tuner with IntercaStM **decoding**

capability 977; a modem 976; an infrared input port 975; NTSC or PAL audio/video output 974...

...973; and embedded

operating system with Java capability 972 running on a microprocessor, and a firmware contest **client** 971. Like the computer-based **client** machine 160, the set-top **client** machine 970 uses the GPS receiver in the GSU to discipline

the local clock of the **client** machine. This clock is used to trigger the

display of queries on the television screen, as well as to measure the elapsed time taken by the **user** when answering queries (or submitting responses to ITRs).

The television-based **client** machine 970 has a number of advantages over the computer-based **client** machine 160. First, the bandwidth

requirements on the modem Internet connection are greatly reduced since much of the content is delivered through the television signal. Second, the set-top **client** machine 970 can be made much more inexpensively as compared to a general purpose computer. For the end- **user** , the set-top box 970 could be even provided at a reduced fee or even for no...

...needed, since the television signal will be fairly well synchronized due to the realtime nature of television **broadcast** , in contrast to the packed-based, store-and-forward architecture of the internet.

Alternative Applications For The GSU...

...clock or even a GPS device. These functions fall into three basic categories: time and space synchronized **generation** of output events; time and space stamping of

input events; and verification of previously **generated** time and space stamps.

The first category of functionality is the **generation** of output events in response to specific time and space conditions. The GSUcore processor 750 can receive instructions, through a local **user** interface or through an interconnection to another device or computer, that set up time and space constraints...

...action at the instant of the desired start-time. The action performed in this case was the **decryption**

and display of the contest query. The GSU 175 can be programmed to **generate** an number of different output actions in response to the timespace conditions. However, using the security and **encryption** capabilities of the GSU, the nature of these actions may be concealed until the action is actually...

...such as a scavenger hunt game in which additional clues are revealed by the GSU as the **player** reaches each sub-goal location.

Page 88 of 238

The second category of functionality is the creation...

...again either through a local operator interface or through a connection to another device or computer to **generate** a time and space stamp. This stamp may or may not be associated with additional input device data. When associated with additional input data, the GSU **encryption** capabilities can be used to **generate** a digital signature on the combined time, location, and input data. This digital signature can later be...

...scanners, fingerprint readers, iris-scanners, vehicle counters, optical sensors for race finish lines, temperature sensors, and signature **capture** devices. The applications for a GSU having these inputs are virtually limitless, and the input devices shown...taken and incorporated into the record of the transaction.

The time and space stamp placed on the **captured** image would be digitally

signed by the GSU to allow verification of the image at a later...

...use as peripheral

devices to general purpose personal or business computers. These devices could connect to the **client** computer using PCMCIA slots, ISA/PCI or SCSI

interfaces, or through serial or parallel port connections. Alternatively ...

...also enables

secure and precise calculation of time and space stamps for events that occur at a **client** machine. These stamps are digitally signed so that they may be authenticated and to make them resistant...

...so as long as the specified delay is greater than the worst case latency expected for the **client** machines of these competitors.  
In addition, the Internet-based competition-promoting system of the present invention can also enable secure time and space-stamping of **client** machine-based activities such as the submission of offers to buy or sell securities, options or the...

...buy goods being auctioned off at on-line auction sites. When using the hardware-based GSUhereof, each **client** machine in the system is enabled to **generate** a digitally-signed time and space stamp for each transaction, thereby allowing the **client**'s  
Page 91 of 238  
transactions to be processed (i.e. executed and cleared) in a secure...

...server 45; one or more real-time price-quotation and trading servers 55; and a plurality of **client** machines 160. In many respects, the system of FIG. 5 is similar to the system of FIG...

...The primary server provides certain functionality to the system, communicating with the realtime market state server 45, **distributing** quote and other market data to the real-time price-quotation and trading servers 55, providing a master clock for the system, and collecting and performing preliminary processing on quotation and trade **requests**.  
The primary server 100 is substantially similar to that provided for the contest-based embodiment of the...

...change trader quote delays, and other such activities.  
The single primary server 100 communicates indirectly with the **client** machines through a number of real-time price-quotation and trading servers

55 These servers relay quotes...

16/5,K/20 (Item 17 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00474513 \*\*Image available\*\*

**CONTENT-BASED VIDEO ACCESS**

**ACCES A DES IMAGES SUR LA BASE DE LEUR CONTENU**

Patent Applicant/Assignee:

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QUEK Francis,

Inventor(s):

QUEK Francis,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9905865 A1 19990204

Application: WO 98US15063 19980722 (PCT/WO US9815063)

Priority Application: US 9753353 19970722

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NL PT SE

Main International Patent Class: **H04N-005/93**

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 19512

English Abstract

A method, and apparatus (see figure 1), for accessing a video segment of a plurality of video frames. The method includes the steps of segmenting the plurality of video frames into a plurality of video segments based

upon semantic content and designating a frame of each segment of the plurality of segments as a keyframe and as an index to the segment (see figure 7). The method further includes the steps of ordering the keyframes and placing at least a portion of the ordered keyframes in an ordered display with a predetermined location of the ordered display defining a selected location (see figure 7). A keyframe may be designated as a selected keyframe. The ordered keyframes may be processed through the ordered display until the selected keyframe occupies the selected location (see figure 7).

#### French Abstract

Cette invention se rapporte a un procede et a un appareil (figure 1) permettant d'accéder a un segment video d'un ensemble de plusieurs images video. Ce procede consiste a segmenter le groupe d'images video en plusieurs segments video sur la base du contenu semantique et a designer une image de chaque segment du groupe de segments comme image clef et comme repere de ce segment. Ce procede consiste en outre a classer dans l'ordre des images clefs et a placer au moins une partie des images clefs classees dans une disposition d'affichage classee, dans laquelle une position predeterminee definit une position choisie. Une image clef peut etre designee comme image clef choisie. Les images clefs classees dans l'ordre peuvent etre traitees sur toute la surface de l'affichage classe jusqu'a ce que l'image classee selectionnee occupe la position selectionnee.

Main International Patent Class: H04N-005/93

Fulltext Availability:

Claims

#### Claim

- ... representation is particularly useful because it optimizes the use of screen real-estate, and so permits a **user** to browse shots from **different** viewpoints **simultaneously**. In this case the animation of the keyframes in each MAR are synchronized so that when one...
- ...representations will centralize the concomitant keyframes. Given sufficient computational resources and screen real-estate, one may even **play** the synchronized **video** of all viewpoints **simultaneously**. The same set of interfaces may be used to view and study the resulting organized video. Another...
- ...law.  
Video may serve as legal courtroom archives either in conjunction with or in lieu of stenographically **generated** records. in this case, the domain events to be detected in the video are the transitions between...
- ...episodes in which the witness-box is vacant.  
A witness-box camera may be set up to **capture** the vacant witness-box before the proceedings and provide a background template from which occupants may be...clusters in the audio track.  
In such an application, it is reasonable to expect multiple synchronized video **streams**. Again, since the underlying thread in our technology is the **time** synchrony of the **video** components, we can utilize all the same interaction components as in the previous example. The multiple video **streams** may be represented in the interface as different keyframe windows. This allows us to organize, annotate and access the multiple video **streams** in the semantic structure of the courtroom proceedings. This may be hierarchy of the (possibly cross-session) testimonies of particular witnesses, direct and cross examination, witness sessions, **question**

and witness response alternations, and individual utterances by courtroom participants. Hence the inherent structure, hierarchy, and logic...

...example by using image vectors extracted by VCM or the vector fields contained in the standard MPEG **encoding** ), the most significant moving objects in most typical home videos are people. The same head-detector described...2 locate all moderator utterances. These may be correlated with the RMS power peaks in the audio **stream** . The same process will detect presentations to the membership. Members who speak or rise to speak may...

...speaker-wise decomposition of the meeting that may be presented in our multiply-linked interface technology. A **user** may enhance the structure in our hierarchical editor and annotator to group sub-shots under agenda items marketing may also benefit under the embodiments described above. Mirroring the success of desktop **publishing** in the 1980's, we anticipate the immense potential in the production of marketing and business videos...

16/5,K/21 (Item 18 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00432616

**A COMMUNICATION SYSTEM ARCHITECTURE**  
**SYSTEME, PROCEDE ET PRODUIT MANUFACTURE POUR L'ARCHITECTURE D'UN SYSTEME DE**  
**COMMUNICATION**

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SOLBRIG Erin M,  
CERF Vinton,  
GROSS Phil,  
DUGAN Andrew J,  
SIMS William A,  
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SMITH Robert S II,  
KELLY Patrick J III,  
GOTTLIEB Louis G,  
COLLIER Matthew T,  
WILLE Andrew N,  
RINDE Joseph,  
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TURNER Don A,  
WALTERS John J,  
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Patent and Priority Information (Country, Number, Date):

Patent: WO 9823080 A2 19980528  
Application: WO 97US21174 19971114 (PCT/WO US9721174)  
Priority Application: US 96751203 19961118; US 96751668 19961118; US  
96752271 19961118; US 96758734 19961118; US 96751209 19961118; US  
96751661 19961118; US 96752236 19961118; US 96752487 19961118; US  
96752269 19961118; US 96751923 19961118; US 96751658 19961118; US  
96752552 19961118; US 96751933 19961118; US 96751663 19961118; US  
96746899 19961118; US 96751915 19961118; US 96752400 19961118; US  
96751922 19961118; US 96751961 19961118

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES  
FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN  
MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU  
ZW GH KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES  
FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD  
TG

Main International Patent Class: H04M-007/00

International Patent Class: H04L-012/56; **H04N-007/14** ; H04L-029/06;  
H04M-003/42; H04M-003/50; H04M-011/06; H04M-015/00; H04Q-003/00;  
H04M-003/46

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 168195

English Abstract

Telephone calls, data and other multimedia information is routed through a hybrid network which includes transfer of information across the internet. A media order entry captures complete user profile information for a user. This profile information is utilized by the system throughout the media experience for routing, billing, monitoring, reporting and other media control functions. Users can manage more aspects of a network than previously possible, and control network activities from a central site.

French Abstract

Des appels telephoniques, des donnees et autres informations multimedias sont achemines par un reseau hybride capable egalement de transmission de donnees par l'Internet. Une rubrique d'ordonnancement des supports utilise en mode exclusif des informations completes de profils utilisateurs concernant un meme utilisateur. Ces informations de profils sont utilisees par le systeme, pendant toute la duree active du support, a des fins d'acheminement, de facturation, de surveillance, de compte-rendu et autres fonctionnalites de gestion de supports. Les



utilisateurs peuvent ainsi gerer un plus grand nombre de fonctionnalites  
reseau et gerer des activites reseau depuis un site central.

...International Patent Class: **H04N-007/14**  
Fulltext Availability:  
Detailed Description

#### Detailed Description

... switched from PS1-N Interface 257 to PSTN Interface 258 using the TDM  
bus 260.

Similarly, PCM **audio** is switched from PSTN Interface 258 to PSTN  
Interface 257 using the TDM bus 260.

In the...service, they must be authorized for use of the service and may  
be given

security tokens or **encryption** keys to ensure access to the service.

This

authorization responsibility might also place restrictions upon the types  
...calls. This on-line registration message would most likely be sent to  
the directory service in an **encrypted** format for security. The  
**encryption**

The IP address identifying the port that is being used to connect this  
computer to the network...

...the message was received and processed. This  
acknowledgment message may also contain some sort of security or  
**encryption** key to guarantee secure communication with the directory  
service when issuing  
additional commands. When the PC receives...calls. This on-line  
registration message would most likely be sent to the directory service  
in an **encrypted** format for security. The **encryption** would be based  
upon an common key shared between the PC and the directory service. This  
message...the message was received and processed. This acknowledgment  
message may also contain some sort of security or **encryption** key to  
guarantee secure communication with the directory service when issuing  
additional commands. When the PC receives...

16/5,K/22 (Item 19 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00418748 \*\*Image available\*\*

#### **SYSTEMS AND METHODS FOR SECURE TRANSACTION MANAGEMENT AND ELECTRONIC RIGHTS PROTECTION**

#### **SYSTEMES ET PROCEDES DE GESTION DE TRANSACTIONS SECURISEES ET DE PROTECTION DE DROITS ELECTRONIQUES**

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Inventor(s):

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SIBERT W Olin,  
SPAHN Francis J,  
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Patent and Priority Information (Country, Number, Date):

Patent: WO 9809209 A1 19980305

Application: WO 97US15243 19970829 (PCT/WO US9715243)

Priority Application: US 96706206 19960830

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FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN

MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW

GH KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI

FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Main International Patent Class: **G06F-001/00**

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 195626

#### English Abstract

The present invention provides systems and methods for electronic commerce including secure transaction management and electronic rights protection. Electronic appliances such as computers employed in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Secure subsystems used with such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Secure distributed and other operating system environments and architectures, employing, for example, secure semiconductor processing arrangements that may establish secure, protected environments at each node. These techniques may be used to support an end-to-end electronic information distribution capability that may be used, for example, utilizing the "electronic highway".

#### French Abstract

La presente invention concerne des systemes et des procedes de commerce electronique comprenant une gestion de transactions securisees et la protection de droits electroniques. Des appareils electroniques tels que des ordinateurs utilisent conformement a la presente invention contribuent a assurer que l'accès aux informations et l'utilisation des informations ne se font que par des voies autorisees et ils maintiennent l'integrite, la disponibilite et/ou la confidentialite des informations. Des sous-systemes securises utilises avec ces appareils electroniques constituent un environnement de distribution virtuel (VDE) reparti pouvant faire valoir une chaine securisee de traitement et de commande, par exemple, pour commander et/ou mesurer ou encore controler l'utilisation d'informations memorisees ou disseminees electroniquement. Cet environnement de distribution virtuel peut etre utilise pour proteger les droits de divers participants dans le commerce electronique et dans d'autres transactions electroniques ou dans lesquelles intervient l'electronique. Des environnements et des architectures de systemes repartis securises et autres systemes d'exploitation emploient, par exemple, des arrangements de traitement a semi-conducteurs securises pouvant etabli des environnements proteges securises a chaque noeud. On peut utiliser ces techniques pour apporter un soutien a une capacite de distribution d'informations electroniques de bout-en-bout pouvant etre utilisees, par exemple, en empruntant l'"autoroute electronique".

Main International Patent Class: G06F-001/00

16/5,K/23 (Item 20 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00344642

**SYSTEMS AND METHODS FOR SECURE TRANSACTION MANAGEMENT AND ELECTRONIC RIGHTS PROTECTION**

**SYSTEMES ET PROCEDES DE GESTION SECURISEE DE TRANSACTIONS ET DE PROTECTION ELECTRONIQUE DES DROITS**

Patent Applicant/Assignee:

ELECTRONIC PUBLISHING RESOURCES INC,

Inventor(s):

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SHEAR Victor H,

SPAHN Francis J,

VAN WIE David M,  
Patent and Priority Information (Country, Number, Date):  
Patent: WO 9627155 A2 19960906  
Application: WO 96US2303 19960213 (PCT/WO US9602303)  
Priority Application: US 95388107 19950213  
Designated States: AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB  
GE HU IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL  
PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN KE LS MW SD SZ UG AZ BY  
KG KZ RU TJ TM AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE BF BJ CF  
CG CI CM GA GN ML MR NE SN TD TG  
Main International Patent Class: G06F-001/00  
International Patent Class: G06F-17:60  
Publication Language: English  
Fulltext Availability:  
Detailed Description  
Claims  
Fulltext Word Count: 207972

#### English Abstract

The present invention provides systems and methods for electronic commerce including secure transaction management and electronic rights protection. Electronic appliances such as computers employed in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Secure subsystems used with such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Secure distributed and other operating system environments and architectures, employing, for example, secure semiconductor processing arrangements that may establish secure, protected environments at each node. These techniques may be used to support an end-to-end electronic information distribution capability that may be used, for example, utilizing the "electronic highway".

#### French Abstract

Systemes et procedes destines au domaine du commerce electronique, et notamment a la gestion securisee des transactions et a la protection electronique des droits. Les appareils electroniques tels que les ordinateurs utilises conformement a la presente invention permettent d'assurer que les informations ne sont consultees et exploitees que de maniere autorisee, et ils conservent l'integrite, la disponibilite et/ou le caractere confidentiel des informations. Les sous-systemes securises utilises en association avec de tels appareils electroniques constituent un environnement de distribution virtuel distribue (VDE) apte a imposer une chaine securisee de traitement et de commande, par exemple pour la commande et/ou la mesure ou encore le controle de l'utilisation d'informations stockees ou diffusees electroniquement. Cet environnement de distribution virtuel peut servir a proteger les droits de differents individus impliquees dans le commerce electronique et dans d'autres transactions electroniques ou assistees par des moyens electroniques. On a egalement prevu des environnements et architectures de systeme d'exploitation distribues, securises et autres mettant en oeuvre, par exemple, des ensembles de traitement securise a semi-conducteurs pouvant etablir des environnements securises et proteges au niveau de chaque noeud. Ces techniques peuvent servir de soutien pour une fonction electronique de distribution d'informations de bout en bout, cette fonction etant utilisable, par exemple, dans le domaine de l'"autoroute electronique".

Main International Patent Class: G06F-001/00  
International Patent Class: G06F-17:60  
Fulltext Availability:  
Detailed Description

#### Detailed Description

... more independent clearinghouses and then back to the content providers, including content creators.

The same and/or **different** pathways employed for certain content handling, and related content control information and reporting information handling, may also...types and client requirements. In addition, the

- 266

ability to dynamically assemble independently deliverable components at execution time based on particular objects and users provides a high degree of flexibility, and facilitates or enables a...

16/5,K/24 (Item 21 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00316016

#### **MULTI-CAST DIGITAL VIDEO DATA SERVER USING SYNCHRONIZATION GROUPS SERVEUR MULTIDESTINATAIRE DE DONNEES VIDEO NUMERIQUES UTILISANT DES GROUPES DE SYNCHRONISATION**

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JOHNSON David R,

SIPPLE Ralph E,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9534169 A1 19951214

Application: WO 95US7199 19950606 (PCT/WO US9507199)

Priority Application: US 94255014 19940607

Designated States: CA JP KR AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE

Main International Patent Class: **H04N-007/173**

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 12671

#### English Abstract

A system and method for distributing real-time, compressed, digital video data from a video library (10) composed of multiple mass storage devices through a digital video data server (12) to large numbers of viewers via distribution networks (20) is provided. The server obtains selected frames of video data for viewer-requested programs from high-speed memory using a buffering strategy, replicates the data via a multi-cast technique for each viewer listed in an assigned synchronization group and forwards the data to each viewer's site where it is decompressed, decoded, and converted for display on a television monitor (24) or computer display (26). Each viewer maintains interactive control over the transmission of the digital video data.

#### French Abstract

L'invention concerne un systeme et un procede pour distribuer a de grand nombres de telespectateurs, par l'intermediaire de reseaux de distribution (20), des donnees video numeriques comprimees en temps reel contenues dans une bibliotheque video (10) composee de multiples memoires de masse, par l'intermediaire d'un serveur de donnees video numeriques (12). A l'aide d'une strategie de tamponnage, ce serveur va chercher dans la memoire rapide des images selectionnees des donnees video relatives aux programmes demandes par le telespectateur, reproduit ces donnees par l'intermediaire d'une technique multidestinataire pour chaque telespectateur recense dans un groupe de synchronisation affecte et transmet ces donnees au domicile de chaque telespectateur ou elles sont

decompressées, décodées, et converties pour être affichées sur un moniteur de télévision (24) ou un écran d'ordinateur (26). Chaque telespectateur conserve une commande interactive sur la transmission des données vidéo numériques.

Main International Patent Class: **H04N-007/173**

Fulltext Availability:

Detailed Description

Detailed Description

... demand to more viewers.

In accordance with an aspect of this invention, a system is provided for **distributing** selected real-time, **encoded**, compressed, digital video data on **demand** to one or more display systems for viewing by **viewers**, each **viewer** being resident at a different site. The system provides VCR-type control over the display of the video data to each **viewer**. It comprises a storage capability for **storing** the **encoded**, compressed, digital video data, the data being grouped into distinct programs, each program consisting of multiple frames, the storage mechanism allowing multiple, **concurrent** access to **different** frames within any given program. A high-speed server is provided to selectively retrieve frames of **viewer** - **requested** programs from the storage mechanism. One or more network interfaces is provided to accept the frames from the server, replicate the frames a selected number of times, one copy being for each **viewer** selecting the **transmission** of a particular program within a predetermined amount of time of other **viewers**, and to format the frames into **transmission** packets for **distribution** to the **viewers**.

In accordance with another aspect of the invention, a method is described for distributing selected real-time...

16/5,K/25 (Item 22 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00156314

**SIGNAL PROCESSING APPARATUS AND METHODS**

**DISPOSITIF ET PROCÉDES DE TRAITEMENT DE SIGNAUX**

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Inventor(s):

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CUDDIHY James W,

Patent and Priority Information (Country, Number, Date):

Patent: WO 8902682 A1 19890323

Application: WO 88US3000 19880908 (PCT/WO US8803000)

Priority Application: US 8796 19870911

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KP LK LU MC MG ML MR MW NL NO RO SE SN SU TD TG

Main International Patent Class: H04K-007/00

International Patent Class: **H04N-07:16**

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 161690

English Abstract

A unified system of programming communication. The system encompasses prior art communications (such as, for example, television, radio, electronically transmitted print, and computer communications) and new user specific mass media. Within the unified system, computer system means (205) and methods provide capacity for generating relevant user specific information simultaneously at each station (26) of a plurality of subscriber stations (26).

## French Abstract

Système unifié de communication à programmation regroupant les communications de l'art antérieur (telles que par exemple la télévision, la radio, l'impression transmise électroniquement, et les communications par ordinateur) ainsi que les nouveaux mass médias spécifiques aux utilisateurs. Dans le système unifié, des moyens (205) et procédés mettant en oeuvre des systèmes d'ordinateurs ont la capacité de produire des informations spécifiques à un utilisateur particulier, simultanément à chaque poste (26) d'une pluralité de postes d'abonnés (26).

International Patent Class: H04N-07:16

Fulltext Availability:

Claims

## Claim

... the primary image on the television display. in this fashion, two peripheral units can be viewed 30 **simultaneously** on one television receiver. U.S. Patent to Freeman et. al. No. 4,264,925 describes a multi-channel programming transmission system wherein subscribers may select manually among related programming alternatives transmitted **simultaneously** on **separate** channels. This prior art, too, is limited. It has no capacity for interconnecting or operating a...output apparatus. It ,25 has no capacity for automatically identifying decryption keys and inputting them to a **decryptor** to serve as the key for any step of **decryption**. It has no capacity for identifying and recording the identity of what is input to or output from a **decryptor**, It has no capacity for **decrypting** a transmission 30 then embedding a signal in the transmission--let alone for simultaneously embedding user specific ...0  
ftiliire-tm reconcile aspects of these individual areas of art--monitoring programming, automating ultimate receiver stations, **decrypting** programming,--generating the programming itself, etc.@@into an integrated system. These limitations 5 are both technical and...

...As a second example, because of the lack of a viable independent audit system, each service that **broadcasts encrypted** programming controls and services at each subscriber-station one or more receiver/ **decryptors** dedicated

3 to its service alone. Lacking a viable audit system, services do not transmit to shared...compact forms, thereby 5 maximizing the capacity of any given transmission means to communicate signal information.

Yet **another** objective is expandability. As the operating capacities of computer hardware have grown in recent decades, increasingly sophisticated...and determines that said information at memory matches particular X-token information. (Said X-token information is **different** token-comparison 35 information from the W-token information matched by the length@token of the first...or more, not to cease at the proper time and to continue

beyond said time (until such **time** as some subsequent command may execute "GRAPHICS OFF" or clear information from said video RAM at said...to match-information at SPAM-first 15 precondition register memory-@including all stations that are preprogrammed with **decryption** key information of J but not with **decryption** key information of Z@@particular first@ condition-test-failed instructions of said condition@ overlay-at@205...

...EOFS valve, 39H, to control processor, 39J, and commence transferring information from control processor, 39J, to the PC @MicroKey System of microcomputer, 205; to

30 transmit the instruction, "GRAPHICS ON", to said PC -MicroKey System; to cause matrix switch, 39I, to cease transferring information from control processor, 39J, to said PC -MicroKey System; and to complete all conditional-overlay-at-205 instructions and controlled functions-invoked by said second

3 message at the secondary control level.

Transmitting the instruction, "GRAPHICS ON". to the PC -MicroKey System of the subscriber station of Fig\* 3 (and transmitting "GRAPHICS ON" to other PC -MicroKey Systems at other subscriber stations where the program instruction set 5 of the first message has been run a - a microcomputer, 205, and where said second message causes "GRAPHICS ON" to be causes said PC -MicroKey System to combine the programming of Fig. 1A and of Fig\* 1B and transmit the .combined...

...is 'Compared-to 11011, Said matches cause the control processors, 39J, of said stations to complete the **decrypt** process-and-meter-current header-message instructions of ...of meter information at a station where inefficient operation of a microcomputer, 205, prevented combining; then the **decoder** -203 10 source mark of the **decoder** , 203, of said station; then information of the **decryption** mark of key J information recorded at SPAM@ **decryption** @mark register memory of said station; then.all of the received binary information of said second message...

...transfer the aforementioned head@r information that identifies a conventional transmission of meter information then the aforementioned **decoder** @203 source mark then information of the information recorded at said SPAM@ **decryption** -mark register **memory** , which is the **decryption** mark of key J, then 41 all of the received binary information of said second message that is recorded at said SPAM-input@signal **memory** ; then to cause matrix switch, 39I, to cease transferring information from control processor, 39J, to said buffer...

...of said portion cause control 5 processor, 39J. to enter 11111 at said SPAM-Flag-monitor-info **memory** ; to enter '111' at the aforementioned SPAM@Flag-primary level-3rd-step-incomplete register **memory** ; and to determine that a comparison of the information at the aforementioned SPAM@Flag-primary@level-2nd-step@ incomplete register **memory** 10 with a particular preprogrammed 11111 results in a match, signifying the completion of the process portion of said **decrypt** -process-and-meter-current header-message instructions.

Resulting in a match causes control processor, 39J, to 15 complete said **decrypt** -process-and.-meter-current header message instructions and all controlled functions of said second message.

Completing the...

...to receive the next SPAM message, Automatically, control processor, 39J. compares-the information at said SPAM@header **memory** to particular preprogrammed cause retention-of@exec information that is 110111, No match results, -Not resulting in...

...to execute-particular collect monitor 'Information and to compare the information at said SPAM-Flag@monitor@info **memory** with particular preprogrammed 11011 information. No match results, (By contrast, matches result at every station that is

30 preprogrammed. to collect monitor information where said second message is **decrypted** but Fig. 1C image information is not displayed. because the "program unit identification code" information in said second message fails to match information at SPAM-first@precondition register@ **memory** . Said matches 35 cause the control processors, 39J. of said stations to execute the aforementioned collect@monitor...

...no combining

occurred because first precondition program unit information t failed to match and which transmission contains **decryption** mark information, then to transfer the aforementioned **decoder** -203 source mark information, then information of the 10 **decryption** mark of key J information recorded at SPAM **decryption** @mark register **memory** , then all of the received binary information of said second message that is recorded at the SPAM...

...Then said instructions cause said control processors, 39JI, to place 11111 at said SPAM@Flag@monitor@info **memory** , at the aforementioned SPAM@Flag@first@condition-failed **memory** , and at the aforementioned SPAM@Flag@do@not-meter **memory** and 20 to continue executing conventional control instructions, a

Then the conventional control instructions of said stations cause said control processors, 39J. to cause all apparatus of the controllers, 39, to delete from **memory** all-information of said second message and to commence waiting to receive 25 information of a subsequent...

...of Fig. 3f

causes control processor, 39J, to cause all apparatus of controller, 39, to delete from **memory** all information of said second message; to cause matrix switch, 391, to commence **transferring** information from the EOFs valve identified by the information at the aforementioned SPAM-primary-input source register **memory** , which is EOFs valve, 39F, to control processor, 39J; and to commence waiting to receive 35 information...meter & monitor information (#4) causes buffer/comparator, 14, automatically to compare the header information that identifies a **transmission** of meter 5information to particular preprogrammed header identification-@14 information A match results with the aforementioned meter...



Set	Items	Description
S1	69612	CLIENT? OR VIEWER? OR USER? OR STANDALONE OR STAND()ALONE - OR PC OR PCS OR PERSONAL()COMPUTER? OR WORKSTATION? OR WORK()- STATION? OR NODE?
S2	14026	REQUEST? OR ASK OR ASKS OR ASKED OR ASKING OR PETITION? OR CALL()(ON OR UPON) OR QUER? OR QUESTION? OR INQUIR? OR DEMAND? OR REQUISITION OR APPLY OR APPLYING
S3	18979	CAPTUR? OR MEMORY OR CACHE? OR STORE? ? OR STORING OR SAVE OR SAVING OR KEEP? ? OR KEEPING
S4	13583	(TV OR TELEVISION OR RADIO)() (SHOW? OR PROGRAM? OR BROADCA- ST?) OR MEDIA()ASSET? OR VIDEO? OR AUDIO? OR MULTIMEDIA OR ME- DIA
S5	25106	TIME OR SCHEDULE? OR PERIOD OR DURATION OR SIMULTANEOUS? OR CONCURRENT?
S6	3563	ENCOD??? OR DECOD??? OR ENCRYPT??? OR CIPHER? OR CYPHER? OR DECRYPT? OR CYPHERTEXT OR ENCRYPT? OR UNCOD? OR UNENCRYPT? - OR ENCIPHER? OR UNCOD? OR DECIHER? OR UNCYPHER? OR UNCYPHER? - OR CYPTO?
S7	22705	PUBLISH? OR ISSUE OR DISPURS? OR DISTRIBUT?
S8	18264	DIFFERENT OR ANOTHER OR SEPARATE OR TARGET
S9	29718	TRANSFER? OR STREAM? OR SEND? OR TRANSMIT? OR TRANSMISSION OR GENERAT? OR PLAY? OR BROADCAST?
S10	18	S1 AND S2 AND S3 AND (S4 (3N) S5)
S11	45574	S7 OR S9
S12	16	S10 AND S11
S13	332	S8 (3N) S5
S14	0	S12 AND S13
S15	0	S12 AND DIFFERENT()TIME
S16	0	S10 AND S13

File 256:SoftBase:Reviews,Companies&Prods. 82-2003/May  
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DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.  
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01714437 DOCUMENT TYPE: Product

**PRODUCT NAME: DVRex RT Professional (714437)**

Canopus Corp (649945)  
711 Charcot Ave  
San Jose, CA 95131 United States  
TELEPHONE: (408) 954-4500

RECORD TYPE: Directory

CONTACT: Sales Department

Canopus's DVRex RT Professional is a scalable digital video editing (DVE) system that offers RS-422 analog deck control and balanced audio I/O. DVRex RT Professional allows **users** to **capture** video through on-board IEEE 1394 and composite connectors. Through the IEEE 1394 interface, DVRex RT also offers deck and camera control of DV and DVCAM devices. It uses RS-422 to support deck and camera control of analog devices. The system also can produce **video** in real **time** to DV or analog. DVRex RT outputs to MPEG-1, MPEG-2, and **streaming** video files. Video can be delivered on tape, CD, DVD, or to the Web. The audio clock is genlocked to video reference, **streamlining** audio and video synchronization **demands**. Balanced audio cables and connectors limit noise. The DVRex RT Professional package includes the Canopus RexEdit 2.91 and Adobe Premiere 6.0 editing tools, along with Boris Graffiti (TM), DVDit! (C) SE, and Sonic Foundry ACID. Tapping Premiere's titler and Boris Graffiti, producers can create multiple titles in real time, adding motions and attributes to individual titles. DVRex RT includes color correction, luma-key, chromakey, parametric equalizer, delay, and high- and low-pass filters. A video that demonstrates the system's features can be accessed on the Canopus Web site.

DESCRIPTORS: Digital Video; DVD; Electronic **Publishing** ; Graphics Tools; Multimedia

HARDWARE: IBM PC & Compatibles; Pentium  
OPERATING SYSTEM: Windows NT/2000  
PROGRAM LANGUAGES: Not Available  
TYPE OF PRODUCT: Micro  
POTENTIAL USERS: Video Editing  
PRICE: \$4,399; includes three-year limited warranty

OTHER REQUIREMENTS: 256MB RAM; Win NT 4+; dual 450MHz+ Pentium+ CPUs; two free PCI slots;  
SERVICES AVAILABLE: Warranty  
REVISION DATE: 020625

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DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.  
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01059251 DOCUMENT TYPE: Product

**PRODUCT NAME: StreamPix (059251)**

NorPix Inc (477303)  
1751 Richardson #2517  
Montreal, PQ H3K 1G6 Canada  
TELEPHONE: (514) 846-0009

RECORD TYPE: Directory

CONTACT: Sales Department

NorPix's **StreamPix** is a Windows-based digital video recording software package that can record real- **time video** to hard disk at rates of up to 60MBps. The system is ideal for applications such as motion analysis, image archiving, flow analysis, medical imaging, and Web inspection. Cameras supported include standard RS-170/CCIR, NTSC/PAL, digital formats, 8- to 16-bit monochrome, and color RGB and high resolution 1k x 1k. **StreamPix** supports Matrox frame grabbers and other boards on **request**. The software can process results with third-party toolkits such as Visilog or Matrox MIL, and it supports Matrox Meteor2. **StreamPix** features VCR-like controls, including Record, **Play**, Rewind, Fast Forward, Step, and Pause. **Users** can export images as BMP or TIFF files, or **play** back AVI-style movies. **Users** can acquire from color RGB, NTSC, monochrome RS170, or high resolution 1k x 1k cameras at up to 60 megabytes per second. The system offers real- **time digital video** recording directly to **memory** or to fast IDE hard disk.

DESCRIPTORS: Digital Video; Graphics for Science & Engineering; Image Processing; Quality Assurance; Real **Time** Data Acquisition; **Video** Frame Grabbers; Webcams

HARDWARE: IBM PC & Compatibles  
OPERATING SYSTEM: Windows NT/2000  
PROGRAM LANGUAGES: Not Available  
TYPE OF PRODUCT: Micro  
POTENTIAL USERS: Real-Time Video, Web Inspection Systems, Medical, Manufacturing  
PRICE: Available upon request

REVISION DATE: 20011130

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DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.  
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01058637 DOCUMENT TYPE: Product

PRODUCT NAME: WebCine Server (058637)

Philips Digital Networks (703796)  
1000 W Maude Ave  
Sunnyvale, CA 94085-2810 United States  
TELEPHONE: (408) 617-4900

RECORD TYPE: Directory

CONTACT: Sales Department

Philips Digital Networks' WebCine Server delivers on- **demand streaming** of MPEG-4 multimedia files. Files can be delivered to Internet or intranet **users**. WebCine Server offloads packetization operations to the WebCine Encoder, improving **streaming** performance. With that, WebCine Server can support up to 1,000 concurrent connections. The WebCine Server package includes a Pentium III computer, a Linux operating system, 256MB of **memory**, and 40GB of local disk storage. The system is integrated easily with existing Web servers, requiring only the creation of hyperlinks between servers. Additionally, WebCine Server employs widely used protocols, such as the Real-Time Transport Protocol (RTP) and the Real-Time **Streaming** Protocol (RTSP), further **streamlining** integration. The two protocols offer controlled, real- **time** delivery of synchronized **audio** and video content over IP networks. Future versions of WebCine Server will offer embedded content rights management, packet loss recovery, and advanced interactive features.

DESCRIPTORS: Content Providers; Digital Video; Intranets; **Streaming**

Media; Web Servers; Workstations

HARDWARE: IBM PC & Compatibles; Pentium  
OPERATING SYSTEM: Linux  
PROGRAM LANGUAGES: Not Available  
TYPE OF PRODUCT: Micro; Workstation  
POTENTIAL USERS: Video and Audio Streaming, Multimedia Streaming, Content Providers  
PRICE: Available upon request; includes Linux workstation  
REVISION DATE: 20020228

12/5/4

DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.  
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00141232 DOCUMENT TYPE: Review

PRODUCT NAMES: MPEG 4 (832146); LSI Domino (139483)

TITLE: The Next MPEG Step: Chip makers are gearing up for a new video...  
AUTHOR: Takahashi, Dean  
SOURCE: Electronic Business, v28 n9 p80(5) Sep 2002  
ISSN: 0163-6197  
HOMEPAGE: <http://www.eb-mag.com>

RECORD TYPE: Review  
REVIEW TYPE: Product Analysis  
GRADE: Product Analysis, No Rating

LSI Logic's programmable LSI Domino chip will be upgraded easily with software to support MPEG's MPEG-4, says a spokesperson for LSI, but Sigma Designs says there will be a good market for dedicated silicon. Both methods would allow users to capture video any time, in any location, and to expect that content can be exchanged and shown on any device. MPEG-4 has been embraced by chip makers for its improved compression, but the question of MPEG-4's profitability looms. MPEG-4 images look better, and can blend graphics and other interactive elements, say proponents, and MPEG-4 transmits well over phone lines, broadcast, cable, or wireless, with data rates from 5 Kbps to 50 megabits per second. MPEG-4, therefore, can show a small video on a cell phone or a rich image on a digital TV. Obstacles slowing adoption, however include disagreement over MPEG-4 licensing, and another is strong competition from MPEG-2 and from vendors who support their own video compression technologies, including Microsoft and RealNetworks. One expert says MPEG-4's life will be limited because so much more can be put on a chip, so chip makers will have to carefully strategize in adopting MPEG-4. Currently there are 19 variations of MPEG-4, which are called profiles, and deploying them in silicon will be difficult. Because of various limitations in the hybrid solution market for MPEG-4, some makers are seeking other customers, including foreign phone companies.

COMPANY NAME: Vendor Independent (999999); LSI Logic Corp (352756)  
SPECIAL FEATURE: Graphs Charts  
DESCRIPTORS: Computer Equipment; Digital Video; File Compression  
REVISION DATE: 20030228

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DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.  
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00122160 DOCUMENT TYPE: Review

PRODUCT NAMES: Visual Collaboration Application Server (VCAS) (792217);  
eVideo Application Server (792229); VTEL SmartStation (694754);

Conference Server (106682); Meeting Point Conference Server (691968)

**TITLE:** Enablers for IP videoconferencing  
**AUTHOR:** Edwards, Morris  
**SOURCE:** Communications News, v36 n12 p90(2) Dec 1999  
**ISSN:** 0010-3632  
**HOME PAGE:** <http://www.comnews.com>

**RECORD TYPE:** Review  
**REVIEW TYPE:** Product Analysis  
**GRADE:** Product Analysis, No Rating

PictureTel's Visual Collaboration Application Server (VCAS) and eVideo Application Server, VTEL's SmartStation, and White Pine Software's CU-SeeMe and MeetingPoint Conference Server are highlighted in a discussion of tools that enable IP videoconferencing, or bi-directional videoconferencing over IP networks. PictureTel has announced one of the most comprehensive plans to offer live, real-time videoconferences and other video-enabled services over IP networks. The initiative, which is called Visual Collaboration for the Net (VCN), uses the full span of desktop and group videoconferencing products and services with network access and transport abilities provided through major network service providers. A primary component of VCN is VCAS, which permits collaborative conferencing, streaming, and broadcasting of events via a Web video portal. Users access VCAS through an Internet service provider (ISP) and standard browser, and can schedule and participate in live videoconferences over IP and ISDN networks. Streaming video and slides can be presented to a widely separated audience, and users can provide distance learning sessions that use experts and stored video on demand. A previously broadcast and archived event can also be viewed. eVideo Application Server creates, distributes, and manages streaming video applications over IP networks. VTEL SmartStation desktop and WG500 workgroup videoconferencing systems permit clickable connections to digital and IP networks call-by-call.

**COMPANY NAME:** PictureTel Corp (482641); Forgent Networks Inc (725986);  
First Virtual Communications (665606)  
**SPECIAL FEATURE:** Charts  
**DESCRIPTORS:** Conferencing; Meetings & Conventions; Network Servers;  
Presentations; Videoconferencing; VoIP  
**REVISION DATE:** 20021125

12/5/6

DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.  
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00113683 DOCUMENT TYPE: Review

**PRODUCT NAMES:** Matrox DigiSuite (733491)

**TITLE:** DigiSuite Makes Real-Time Lossless Editing Affordable  
**AUTHOR:** Yager, Tom  
**SOURCE:** DCC Magazine, v1 n1 p44(2) Nov 1998  
**ISSN:** 1077-5862  
**HOME PAGE:** <http://www.advanstar.com>

**RECORD TYPE:** Review  
**REVIEW TYPE:** Review  
**GRADE:** A

Matrox's Matrox DigiSuite offers strong PC-based digital video facilities. The product is a combination of hardware and software that gives the PC the ability to capture, play back, and manipulate digital video. Assuming there is enough hard drive space, DigiSuite can play back two channels of full-resolution lossless video, simultaneously and in real time. While it is playing, users can apply

TBC proc amp settings, tint, and other parameters. All effects can be combined without sacrificing real-time **playback**, so long as **users** stay within two video layers and one graphics layer. The DigiSuite has plenty of third-party support, although it is fully functional even without enhancements. DigiSuite is available in two option packages: loaded, and comfortably equipped. The loaded version comes with DigiMix, DigiMotion, an audio connector panel, and a video connector panel. The lossless video is still compressed, but done in such a way that video quality is not affected. DigiSuite is bundled with Adobe Premiere 5.0 for editing. Also, because it has multiple channels of 2D DVE, it is possible to scale and perform animated movies on all three layers simultaneously. It also brings hardware-assisted compositing with unlimited layers.

PRICE: \$9995

COMPANY NAME: Matrox Electronic Systems Ltd (621641)  
SPECIAL FEATURE: Screen Layouts  
DESCRIPTORS: Digital Video; Graphics Tools; IBM PC & Compatibles; Image Processing  
REVISION DATE: 20010730

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DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.  
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00110121 DOCUMENT TYPE: Review

PRODUCT NAMES: Vosaic (678791); Java (573744); Emblaze (712876); Media Framework (713805)

TITLE: Java Does Video  
AUTHOR: Johnson, Nels  
SOURCE: Digital Video Magazine, v6 n7 p68(2) Jul 1998  
ISSN: 1075-251X  
HOMEPAGE: <http://www.dv.com>

RECORD TYPE: Review  
REVIEW TYPE: Product Analysis  
GRADE: Product Analysis, No Rating

Netscape Communications' Media Framework, GEO's Emblaze, and Vosaic's namesake product are highlighted in a discussion of the use of Sun Microsystems' Java language in digital video production. Media Framework is a recent implementation, RealNetworks has a Java deal with Sun, and some other smaller vendors are also developing **streaming** video based on Java code. However, on most consumers' computers, Java's (but not JavaScript's) performance is less than adequate. GTS is a good example of a company dedicated to Java-based **streaming** video. GTS uses Java by **streaming** JPEG images and audio data from a server to an applet on a **client** that runs a Web browser. The applet shows the JPEG **stream** as a video sequence on a World Wide Web page, while **concurrently** rendering the **audio** track. Vosaic is regarded as the next **generation** of on-**demand streaming** of **stored** video assets. Vosaic's media server processes video, audio, and synchronization data, or three separate video **streams**, and can adjust them on the fly in real-time according to bandwidth conditions. **Standalone** audio **streams** are processed with a Java applet. Emblaze enables a Java-based audio **stream** to run as fast as the system allows, but for video **streaming**, Emblaze is not as effective, say many Webmaster interviewed.

COMPANY NAME: Vosaic LLC (638072); Sun Microsystems Inc (385557);  
Emblaze Systems Ltd (E-Sys) (631078); Netscape Communications Corp (592625)  
SPECIAL FEATURE: Screen Layouts  
DESCRIPTORS: Electronic **Publishing**; Image Processing; Internet Utilities  
; Java; **Streaming** Media

REVISION DATE: 20030527

12/5/8

DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.  
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00107929 DOCUMENT TYPE: Review

PRODUCT NAMES: Microsoft Windows NetMeeting (622648)

TITLE: Ahead of the Curve  
AUTHOR: Koreto, Richard J  
SOURCE: Journal of Accountancy, v185 n2 p93(3) Feb 1998  
ISSN: 0021-8448  
HOMEPAGE: <http://www.aicpa.org>

RECORD TYPE: Review  
REVIEW TYPE: Product Analysis  
GRADE: Product Analysis, No Rating

Microsoft's Microsoft NetMeeting, a free, real- time voice and videoconferencing product, supports videoconferencing via the Internet. K2 Enterprises, an accounting practice with four partners who practice in various locations requiring travel, use NetMeeting to conference. The firm has saved 40 percent of its former phone bill by videoconferencing over the Internet with NetMeeting. This is an example of K2 Enterprise's extensive use of the Internet to enable and streamline communications and other tasks while reducing costs. K2 Enterprises gives a full-day seminar on business use of the Internet, a service that draws considerable attention to K2's own Web site. K2 requests attendees of its Internet seminars to consider long and hard what they want their Web sites to do. For instance, will the site be a basic Yellow Page list? or will it provide corporate, product, sales, distribution, and service information or other activities? K2 tells attendees to keep graphics simple to speed page loading. Web pages should also include photographs of key staff, to allow a Web site visitor to match the face of a real person with one on the Web site. K2's site has a page that describes the accountancy in terms of its people, so that K2 can 'make every effort to maintain a high level of integrity, family values, and friendship among all involved.'

COMPANY NAME: Microsoft Corp (112127)  
SPECIAL FEATURE: Charts Screen Layouts  
DESCRIPTORS: Accountants; Groupware; IBM PC & Compatibles; Internet Utilities; Meetings & Conventions; Videoconferencing  
REVISION DATE: 20030527

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DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.  
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00106857 DOCUMENT TYPE: Review

PRODUCT NAMES: Media 100 xr 4.0 with HDRfx (365602)

TITLE: Media 100 xr, v4.0 with HDRfx  
AUTHOR: Hanish, Michael  
SOURCE: Digital Video Magazine, v6 n1 p65(2) Jan 1998  
ISSN: 1075-251X  
HOMEPAGE: <http://www.dv.com>

RECORD TYPE: Review  
REVIEW TYPE: Review  
GRADE: A

Media 100's Media 100 xr 4.0 with HDRfx, a nonlinear editing system, is a

new entry to the high end of the Media 100 line of nonlinear editing systems. It provides dual- **stream** video and an uncompressed alpha-channel for real-time (with no rendering) dissolve and wipe transitions, color and motion effects, and audio crossfades at full online quality. **Users** considering purchasing the system should review Media 100's World Wide Web site because requirements for the system are rigid and necessary. Media 100's editing software is provided. Changes in this release are many and integral. A consolidated codec is more stable, **memory** management has been rewritten, and speed and stability are enhanced throughout. **Users** can **apply** ColorFX to more than one clip in the timeline, and an extended set of support for EDL import and export is provided. The board and software allow **users** to show and process two **video streams concurrently** with quality of 300KB/frame for NTSC or 360KB/frame for PAL systems. Among things **users** can do are the ability to drop three clips in the timeline and overlap them; add disparate HDRfx-provided transitions; speed two clips up by 50 percent and slow another by 75 percent; and tint one pale blue, posterize another, and invert colors in the third. Static titles can be added to span transitions, and the audio can be option-dragged to overlap and crossfade clips.

PRICE: \$19995

COMPANY NAME: Media 100 Inc (624853)  
SPECIAL FEATURE: Charts Screen Layouts  
DESCRIPTORS: Digital Video; Graphics Tools; Image Processing  
REVISION DATE: 20010730

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DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.  
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00106042 DOCUMENT TYPE: Review

PRODUCT NAMES: Conference Server (106682); Microsoft Windows NetMeeting (622648); LiveLAN (534927); StarWorks (420204); StarCast (686336)

TITLE: Network-Based Video  
AUTHOR: Zeichick, Alan  
SOURCE: Network, v12 n13 p63(4) Dec 1997  
ISSN: 1093-8001

RECORD TYPE: Review  
REVIEW TYPE: Product Analysis  
GRADE: Product Analysis, No Rating

White Pine Software's CU-SeeMe, Microsoft's Microsoft NetMeeting, PictureTel's LiveLAN, and Starlight Networks' StarWorks and StarCast are products highlighted in a discussion of full-motion, network-based video for the desktop. Video is either **transmitted** in real- time , during which the **video** source is created as it is seen, or as **streaming** video, also called on- **demand** video; the latter uses prerecorded clips or other video sources that are **stored** on a server and fetched by an end- **user** application, such as a World Wide Web browser plug-in or a dedicated video **client** . Video also can be **generated** by input from a CCD-based digital camera, or a slide show presentation can be **captured** , with a voice overlay added, and saved to a file. CU-SeeMe measures windows using a fraction of a 640-pixel x 480-pixel screen, including a quarter screen or a 16th screen. NetMeeting and LiveLAN use the Common Intermediate Format (CIF), also called FCIF (Full CIF), which defines a 352-pixel x 288-pixel window. Network-based video servers include StarWorks 3.2, which **streams** video at 150Mbits/sec from Windows NT Server. The **user** gains access to the system via a World Wide Web browser with a StarWorks plug-in, while StarCast provide IP Multicast for Multimedia from analog or digital sources. Both products employ MPEG-1 and Indeo formats. Other topics covered include advanced video and codecs, asynchronous **transfer** mode, and Internet Protocol (IP).



COMPANY NAME: First Virtual Communications (665606); Microsoft Corp  
(112127); PictureTel Corp (482641); Starlight Networks Inc (547883)  
SPECIAL FEATURE: Tables  
DESCRIPTORS: Conferencing; IBM PC & Compatibles; Internet Utilities;  
Network Software; **Streaming** Media; Videoconferencing; Windows NT/2000  
REVISION DATE: 20030527

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DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.  
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00103647 DOCUMENT TYPE: Review

PRODUCT NAMES: Meridian Messenger (586374); Intuity Message Manager  
(564451); Intuity Multimedia Messaging Server (673293); CallXpress  
(471976); TeLANophy (462713)

TITLE: Integrated Messaging Today  
AUTHOR: Steinke, Steve  
SOURCE: Network, v12 n9 p44(6) Sep 1997  
ISSN: 1093-8001

RECORD TYPE: Review  
REVIEW TYPE: Product Analysis  
GRADE: Product Analysis, No Rating

Northern Telecom's (Nortel's) Meridian Messenger, Lucent's Intuity Message Manager and Intuity Multimedia Messaging Server, Applied Voice Technology's CallXpress3, and Active Voice's TeLANophy are products highlighted in a discussion of the move toward integrated voice and fax messaging on today's computer networks. Operation of private branch exchanges (PBXs) and voice mail is explored to allow **users** to better understand issues to be addressed when integrating their functions to **PC** networks, or when making them interoperate transparently with networks. Fax and other telephony services are also discussed. PBXs act as circuit switches to provide routes for real- **time audio** sessions between a microphone at one end of a session, and a loudspeaker at the other. The PBX does digital-to-analog conversion on calls originating in the public phone network before **sending** calls to local destinations. Voice mail systems are automated terminals, or phones that record messages and **store** them in an organized way for **playback** on **demand**. Some solutions, including Octel's Visual Mailbox, provide separate desktop computer **clients** for voice mail, while others, including Meridian Messenger and Intuity Message Manager, provide **clients** that show e-mail, fax messages, and voice in one display and a single application. **Users** can choose either proprietary or open architectures.

COMPANY NAME: Northern Telecom (471631); Lucent Technologies (586072);  
Captaris (567701); Active Voice Inc (491721)  
SPECIAL FEATURE: Charts Screen Layouts  
DESCRIPTORS: Computer Telephony; E-Mail; Fax Software; LANs; Network  
Software; Office Automation; Telecommunications; Telephone Messages;  
Unified Messaging; Voice Mail  
REVISION DATE: 20011130

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DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.  
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00101048 DOCUMENT TYPE: Review

PRODUCT NAMES: Distributed **Processing** (830192)

TITLE: A New Foundation  
AUTHOR: Ozsu, M Tamer

SOURCE: Database Programming & Design, v10 n3 p38(5) Mar 1997  
ISSN: 0895-4518  
HOMEPAGE: <http://www.dbpd.com>

RECORD TYPE: Review  
REVIEW TYPE: Product Analysis  
GRADE: Product Analysis, No Rating

**Distributed** database technology must benefit from faster networks, wireless access, and multimedia to provide **users** with individual data views. Many database vendors have technologies that may soon provide genuine **distribution** during the development cycle. **Client** /server systems are still the preferred solutions, but they are much more advanced than they were in 1992. For instance, today's C/S systems are more unobtrusive in the way they gain access to data from multiple servers, and they support **distributed** transactions to ease seamless operation and can perform **queries** over horizontally fragmented data. The requirements of newer, **distributed** applications mean new challenges and opportunities for the database industry. Newer systems manage **distributed** data with more versatility and efficiency, but to support more complex applications and **queries** over the Internet, new DBMS products will have to account for the **time** dependency of **audio / video** data **streaming** to deliver multimedia. Communication between **client** and server has to be tuned to meet real-time synchronization needs, or the server interface of systems has to allow synchronization routines to gain access to multimedia objects at the server buffer. As for modeling, more advanced models are needed to **capture** application objects. Object DBMSs provide the most promising technology, but they still have to become more full-functioned and scalable, and their performance has to improve.

COMPANY NAME: Vendor Independent (999999)  
DESCRIPTORS: **Client** /server; Database Management; **Distributed**  
Processing; Multimedia; Network Software; Wireless Networks  
REVISION DATE: 19971030

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DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.  
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00099033 DOCUMENT TYPE: Review

PRODUCT NAMES: **StoryBuilder** (643866)

TITLE: **Media Web sites struggle to meet demand**  
AUTHOR: Wagner, Mitch  
SOURCE: Computerworld, v31 n5 . p57(2) Feb 3, 1997.  
ISSN: 0010-4841  
HOMEPAGE: <http://www.computerworld.com>

RECORD TYPE: Review  
REVIEW TYPE: Product Analysis  
GRADE: Product Analysis, No Rating

Vignette's StoryBuilder will be used by **Time New Media** (TNM) as a way to put news out faster on TNM's Pathfinder World Wide Web site. TNM is looking for effective ways to process hundreds of thousands of hits each day, and will use StoryBuilder on the Netly News site, which provides daily news about the Internet and its **users** to subscribers. The larger goal is to **keep** content and formatting separate, so that the site can remain scalable and easy to manage. StoryBuilder is designed to provide the benefits of static pages coded in Hypertext Markup Language (HTML) and dynamic pages built on the fly from an information database. Web servers that deliver database information allow corporate **users** to include more and more current information than is possible with static Web pages. Such servers allow content to be modified or added using prewritten HTML templates. The pages are slower to reach because they are compiled from the

database each time **users** **request** them. StoryBuilder improves on this scenario by compiling popular pages only once and **storing** them as static pages on a hard-disk **cache**. Other large sites, including those from 'The New York Times' and 'Playboy' use multiple servers that run server software from Netscape Communications and Microsoft.

PRICE: \$9500

COMPANY NAME: Vignette Corp (622141)

SPECIAL FEATURE: Screen Layouts

DESCRIPTORS: Authoring Systems; Electronic **Publishing** ; Information Retrieval; Internet Utilities; Magazine **Publishers** ; News Services; **Publishing** ; Web Site Design

REVISION DATE: 20020819

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DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.

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00098567 DOCUMENT TYPE: Review

PRODUCT NAMES: ObjectStore (269956)

TITLE: Object database serves up news

AUTHOR: Leon, Mark

SOURCE: InfoWorld, v18 n50 p14(1) Dec 9, 1996

ISSN: 0199-6649

HOME PAGE: <http://www.infoworld.com>

RECORD TYPE: Review

REVIEW TYPE: Product Analysis

GRADE: Product Analysis, No Rating

Object Design's ObjectStore is part of a solution devised by Time-Warner's New Media to support **publishing** of its World Wide Web newspaper, Personal Edition. Time-Warner rejected relational and object-relational technology, and selected ObjectStore because it allows them to choose specific content and have the application add keyword searches in real time against all the stories. The ObjectStore object database is innately suitable for **storing** direct links to content in various locations. Long **queries** and table joins are eliminated, so **users** get quick, personalized news online. The Personal Edition newspaper, which allows **users** to create a personal newspaper, is available to **users** from the Pathfinder Web site, and provides access to stories from such sources as Reuters, The Associated Press, 'Tass', 'Sports Illustrated', and 'Time'. Time-Warner's selection of Open Data Link Interface technology indicates that the Web could be the 'killer app' for object databases. ObjectStore does not hold content; rather, stories and graphics in Hypertext Markup Language (HTML) files are **stored** in the file system, and ObjectStore uses metadata technology to track connections between **users** 'personal preferences and stories used to create customized content. Analysts say an unadulterated object database can offer better performance for applications in which there are multiple relationships among data blocks.

COMPANY NAME: Progress Co (436461)

SPECIAL FEATURE: Charts

DESCRIPTORS: Alerts; Content Providers; Electronic **Publishing** ; Information Retrieval; Internet Utilities; News Services; Newspapers; **Publishing**

REVISION DATE: 20030130

12/5/15

DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.

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00096515

DOCUMENT TYPE: Review

**PRODUCT NAMES:** Hybrid Media (836923)

**TITLE:** 'I've Seen the Future, and It's Hybrid'

**AUTHOR:** Haight, Tim

**SOURCE:** NetGuide, v3 n10 p168(2) Oct 1996

**RECORD TYPE:** Review

**REVIEW TYPE:** Product Analysis

**GRADE:** Product Analysis, No Rating

Hybrid media applications merge delivery channels and mix them in an invisibly combined **user** experience to provide multimedia content plus network interactivity. The **user**'s desktop machine creates the **user** experience, which appears to be delivered live. Therefore, **users** need not wait for more bandwidth before enjoying interactive multimedia on the desktop. Delivery is via mixed **media**; for example, real-**time** information can be combined with CD-ROM-**stored** content, as many game vendors are already doing. Content can also be downloaded from the Internet overnight, **stored** on the hard disk, and replayed, possibly combined with real-time content, the following day. Content can also be downloaded from a satellite, which **transmits** via **broadcast** for bandwidth optimization; this content can be combined with a telephone uplink or CD-ROM-based content. Web pages can be embedded in an over-the-air TV signal and combined with **broadcast** video on an appropriately equipped computer. For economic reasons, hybrid media is likely to be the future overall trend of the Web. Many unanswered **questions** remain.

**COMPANY NAME:** Vendor Independent (999999)

**DESCRIPTORS:** CD-ROMs; Electronic **Publishing**; Hybrid Media; Information Retrieval; Internet; Multimedia

**REVISION DATE:** 20000630

12/5/16

DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.

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00094258

DOCUMENT TYPE: Review

**PRODUCT NAMES:** ObjectStore (269956)

**TITLE:** Object databases lag

**AUTHOR:** Stedman, Craig

**SOURCE:** Computerworld, v30 n34 p43(1) Aug 19, 1996

**ISSN:** 0010-4841

**HOME PAGE:** <http://www.computerworld.com>

**RECORD TYPE:** Review

**REVIEW TYPE:** Product Analysis

**GRADE:** Product Analysis, No Rating

Object Design's ObjectStore, used by **Time**'s New **Media** unit, is part of a personalized news service that will become available in Fall 1996 on Time's Pathfinder World Wide Web site. A prototype done on Sybase's RDBMS was not satisfactory because of too much overhead and slow performance. RDBMSs **store** data in tables, and the tables must be joined to answer elaborate **queries**. Object databases like ObjectStore, Versant ODBMS, GemStone, Objectivity/DB, Poet, and Ontos DB/Explorer allow **users** to link complex data structures as more easily accessed objects; object-based software also processes multimedia data, including video and audio, while RDBMSs generally **store** only records made up of numbers and characters. While object databases are generally used only for specialized applications, some vendors hope the Internet will provide a way for object databases to become more widely used.

COMPANY NAME: Progress Co (436461)

SPECIAL FEATURE: Charts Graphs

DESCRIPTORS: Database Management; Electronic **Publishing** ; Internet  
Utilities; News Services; OOP (Object Oriented Programming); Program  
Development

REVISION DATE: 20030130

Set	Items	Description
S1	1121876	CLIENT? OR VIEWER? OR USER? OR STANDALONE OR STAND()ALONE - OR PC OR PCS OR PERSONAL()COMPUTER? OR WORKSTATION? OR WORK()- STATION? OR NODE?
S2	1271294	REQUEST? OR ASK OR ASKS OR ASKED OR ASKING OR PETITION? OR CALL() (ON OR UPON) OR QUER? OR QUESTION? OR INQUIR? OR DEMAND? OR REQUISITION OR APPLY OR APPLYING
S3	904954	CAPTUR? OR MEMORY OR CACHE? OR STORE? ? OR STORING OR SAVE OR SAVING OR KEEP? ? OR KEEPING
S4	701532	(TV OR TELEVISION OR RADIO)() (SHOW? OR PROGRAM? OR BROADCA- ST?) OR MEDIA()ASSET? OR VIDEO? OR AUDIO? OR MULTIMEDIA OR ME- DIA
S5	3677712	TIME OR SCHEDULE? OR PERIOD OR DURATION OR SIMULTANEOUS? OR CONCURRENT?
S6	200307	ENCOD??? OR DECOD??? OR ENCRYPT??? OR CIPHER? OR CYPHER? OR DECRYPT? OR CYPHERTEXT OR ENCRYPT? OR UNCOD? OR UNENCRYPT? - OR ENCIPHER? OR UNCOD? OR DECIHER? OR UNCYPHER? OR UNCYPHER? - OR CYPTO?
S7	2404301	PUBLISH? OR ISSUE OR DISPURS? OR DISTRIBUT?
S8	2534603	DIFFERENT OR ANOTHER OR SEPARATE OR TARGET
S9	3798570	TRANSFER? OR STREAM? OR SEND? OR TRANSMIT? OR TRANSMISSION OR GENERAT? OR PLAY? OR BROADCAST?
S10	281	S1 AND S2 AND S3 AND (S4 (3N) S5)
S11	5714238	S7 OR S9
S12	49081	S8 (3N) S5
S13	16903	S11 AND S12
S14	4	S10 AND S13
S15	21	S10 AND S6
S16	0	S15 AND S12
S17	20	S15 AND S11
S18	25	S14 OR S15 OR S17
S19	14	S18 NOT PY>1999
S20	14	S19 NOT PD>19990211
S21	12	RD (unique items)
S22	2704	S1 AND S2 AND S3 AND S4
S23	19	S22 AND S13
S24	12	S23 NOT PY>1999
S25	11	S24 NOT PD>19990211
S26	6	RD (unique items)
File	8: Ei Compendex(R)	1970-2003/May W4 (c) 2003 Elsevier Eng. Info. Inc.
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File	233: Internet & Personal Comp. Abs.	1981-2003/May (c) 2003 Info. Today Inc.
File	94: JICST-EPlus	1985-2003/Jun W1 (c) 2003 Japan Science and Tech Corp(JST)
File	99: Wilson Appl. Sci & Tech Abs	1983-2003/Apr (c) 2003 The HW Wilson Co.
File	95: TEME-Technology & Management	1989-2003/May W3 (c) 2003 FIZ TECHNIK

21/5/1 (Item 1 from file: 8)  
DIALOG(R) File 8: Ei Compendex(R)  
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05811811 E.I. No: EIP01204959160

**Title:** Zero-delay broadcasting protocols for video-on-demand  
**Author:** Paris, Jehan-Francois; Long, Darrell D.E.; Mantey, Patrick E.  
**Corporate Source:** Univ of Houston, Houston, TX, United States  
**Conference Title:** Proceedings of the 1999 7th International Multimedia Conference - ACM MULTIMEDIA '99  
**Conference Location:** Orlando, FL, USA **Conference Date:** 19991030-19991105  
**Sponsor:** ACM  
**E.I. Conference No.:** 56197  
**Source:** Proceedings of the ACM International Multimedia Conference & Exhibition 1999. ACM, New York, NY, United States  
**Publication Year:** 1999  
**CODEN:** 002179  
**Language:** English  
**Document Type:** CA; (Conference Article) **Treatment:** A; (Applications); G; (General Review)  
**Journal Announcement:** 0105W2

**Abstract:** Broadcasting protocols for video-on-demand continuously retransmit videos that are watched simultaneously by many viewers. Nearly all broadcasting protocols assume that the client set-top box has enough storage to store between 48 and 60 minutes of video. We propose to use this storage to anticipate the customer requests and to preload, say, the first 3 minutes of the top 16 to 20 videos. This would provide instantaneous access to these videos and also eliminate the extra bandwidth required to handle compressed video signal. We present two broadcasting protocols using partial preloading to eliminate this extra bandwidth. The first of these protocols, Polyharmonic Broadcasting with Partial Preloading (PHB-PP), partitions each video into between 20 and 160 segments of equal duration and allocates a separate data stream to each individual segment. Our second protocol, the Mayan Temple Broadcasting protocol, uses fewer data streams but requires more overall bandwidth. (Author abstract) 14 Refs.

**Descriptors:** Multimedia systems; Video on demand; Network protocols; Television broadcasting; Video signal processing; Bandwidth; Image compression; Image segmentation

**Identifiers:** Zero-delay broadcasting protocols; Pyramid broadcasting  
**Classification Codes:**

723.5 (Computer Applications); 716.4 (Television Systems & Equipment); 716.1 (Information & Communication Theory); 723.2 (Data Processing)  
723 (Computer Software, Data Handling & Applications); 716 (Electronic Equipment, Radar, Radio & Television)  
72 (COMPUTERS & DATA PROCESSING); 71 (ELECTRONICS & COMMUNICATION ENGINEERING)

21/5/2 (Item 2 from file: 8)  
DIALOG(R) File 8: Ei Compendex(R)  
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05299660 E.I. No: EIP99064699045

**Title:** Rate control for non-real-time video encoding  
**Author:** Pao, I.-Ming; Sun, Ming-Ting  
**Corporate Source:** Univ of Washington, Seattle, WA, USA  
**Conference Title:** Proceedings of the 1999 Visual Communications and Image Processing  
**Conference Location:** San Jose, CA, USA **Conference Date:** 19990125-19990127  
**Sponsor:** IS and T; SPIE  
**E.I. Conference No.:** 55132  
**Source:** Proceedings of SPIE - The International Society for Optical Engineering v 3653 n I 1999. p 509-517  
**Publication Year:** 1999

CODEN: PSISDG ISSN: 0277-786X

Language: English

Document Type: JA; (Journal Article) Treatment: T; (Theoretical)

Journal Announcement: 9908W1

**Abstract:** In **streaming** video applications, video sequences are **encoded** off-line and **stored** in a server. **Users** may access the server over a constant bit-rate channel such as Public Switched Telephone Network (PSTN) or Integrated Service Digital Network (ISDN). Examples of the **streaming** video are video on **demand**, archived video news, and non-interactive distance learning. Before the **playback**, part of the video bit-**stream** is pre-loaded in the **decoder** buffer to ensure that every frame can be **decoded** at the scheduled **time**. For these **streaming video** applications, since the delay (latency) is not a critical **issue** and the whole video sequence is available to the **encoder**, a more sophisticated bit-allocation scheme can be used to achieve better video quality. During the **encoding** process for **streaming** video, two constraints need to be considered: the maximum pre-loading **time** that the **video viewers** are willing to accept and the physical buffer-size at the receiver (**decoder**) side. In this paper, we propose a rate-control scheme that uses statistical information of the whole video sequence as a guidance to **generate** better video quality for video **streaming** involving constant bit-rate channels. Simulation results show video quality improvements over the regular H.263 TMN8 **encoder**. (Author abstract) 15 Refs.

**Descriptors:** \*Image coding; Video signal processing; Statistical methods; Image quality; Computer simulation; Signal to noise ratio

**Identifiers:** Rate control; Video **streaming**

**Classification Codes:**

723.2 (Data Processing); 716.4 (Television Systems & Equipment); 922.2 (Mathematical Statistics); 723.5 (Computer Applications)  
741 (Optics & Optical Devices); 723 (Computer Software); 716 (Radar, Radio & TV Electronic Equipment); 922 (Statistical Methods)  
74 (OPTICAL TECHNOLOGY); 72 (COMPUTERS & DATA PROCESSING); 71 (ELECTRONICS & COMMUNICATIONS); 92 (ENGINEERING MATHEMATICS)

21/5/3 (Item 3 from file: 8)

DIALOG(R) File 8: Ei Compendex(R)

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04688554 E.I. No: EIP97053640076

**Title:** Real-time vector quantization-based image compression on the **SIMPil** low memory **SIMD** architecture

**Author:** Gentile, Antonio; Cat, Huy; Kossentini, Faouzi; Sorbello, Filippo; Wills, D. Scott

**Corporate Source:** Georgia Inst of Technology, Atlanta, GA, USA

**Conference Title:** Proceedings of the 1997 IEEE International Performance Computing & Communications Conference

**Conference Location:** Phoenix, AZ, USA **Conference Date:** 19970205-19970207

**Sponsor:** IEEE

**E.I. Conference No.:** 46342

**Source:** IEEE International Performance, Computing & Communications Conference, Proceedings 1997. IEEE, Piscataway, NJ, USA, 97CH36051. p 10-16

**Publication Year:** 1997

**CODEN:** 002588

**Language:** English

**Document Type:** CA; (Conference Article) **Treatment:** T; (Theoretical)

**Journal Announcement:** 9706W4

**Abstract:** Vector quantization (VQ) has become a popular technique for image compression. While conventional unstructured VQs have the potential of achieving the best theoretical performance, they are also **demanding** in storage and computational requirements. A significant amount of current research on VQ implementations addresses increasing the speed of image **encoding**, which is one of the most computationally expensive operations. This is typically accomplished by imposing structures, exploiting properties of the distance measure, or developing efficient and fast implementations. This paper proposes a parallel implementation of a



. full-search VQ **encoding** algorithm using a low **memory** , fine grain single instruction **stream** multiple data **stream** (SIMD) pixel processor (SIMPil) being developed at Georgia Tech. This implementation fully exposes the available parallelism of the **encoding** process and exploits the processing and I/O capabilities of the processor, resulting in a system that can perform real- **time** image and **video** compression. The proposed implementation **encodes** a large region of the original image at once, replacing each constituent input block with its corresponding VQ codeword index. Preliminary simulation results indicate that the proposed implementation is capable of sustain real-time frame rates. A prototype single **node** SIMPil implementation has been fabricated by MOSIS in 0.8  $\mu$  m CMOS, and is being evaluated. (Author abstract) 17 Refs.

Descriptors: \*Vector quantization; Real time systems; Parallel algorithms ; Computer simulation; Image coding; Digital image storage; CMOS integrated circuits; Data structures; Microprocessor chips

Identifiers: Single instruction **stream** multiple data **streams** (SIMD); SIMD pixel processors (SIMPil)

Classification Codes:

921.1 (Algebra); 723.2 (Data Processing); 722.4 (Digital Computers & Systems); 722.1 (Data Storage, Equipment & Techniques)

921 (Applied Mathematics); 723 (Computer Software); 722 (Computer Hardware)

92 (ENGINEERING MATHEMATICS); 72 (COMPUTERS & DATA PROCESSING)

21/5/4 (Item 4 from file: 8)

DIALOG(R) File 8: Ei Compendex(R)

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03008500 E.I. Monthly No: EI9101010835

**Title: Real- time video data compression system.**

Author: Frost, T. M. E.; Theaker, C. J.

Corporate Source: Univ of Manchester Inst of Science and Technology, Manchester, Engl

Source: IEE Proceedings, Part E: Computers and Digital Techniques v 137 n 5 Sep 1990 p 337-342

Publication Year: 1990

CODEN: IPETD3 ISSN: 0143-7062

Language: English

Document Type: JA; (Journal Article) Treatment: X; (Experimental)

Journal Announcement: 9101

Abstract: The paper describes a system for **capturing** and compressing **video** data in real **time** . It has principally been used for recording activity on the screen of computer **workstations** . Its main application has been in evaluating the useability of computer based products from a human factors point of view, as it allows the replay of screen displays with the same high fidelity as the original computer system. The displays are **captured** in digital form, and owing to the capacity and speed of digital storage media, it is necessary to **apply** significant data compression during the recording phase. The paper examines the degree of data compression necessary to be able to handle typical computer **workstations** . Some of the known techniques of data reduction are outlined, and a practical data compression system described. (Author abstract) 14 Refs.

Descriptors: VIDEO RECORDING; INFORMATION THEORY--Data Compression; IMAGE PROCESSING--Image Coding; COMPUTER **WORKSTATIONS**

Identifiers: VIDEO DATA COMPRESSION; QUANTIZATION ERROR; **ENCODING** SPEED ; FIFO BUFFER

Classification Codes:

716 (Radar, Radio & TV Electronic Equipment); 731 (Automatic Control Principles); 723 (Computer Software)

71 (ELECTRONICS & COMMUNICATIONS); 73 (CONTROL ENGINEERING); 72 (COMPUTERS & DATA PROCESSING)

21/5/5 (Item 1 from file: 35)

DIALOG(R) File 35:Dissertation Abs Online

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01730935 ORDER NO: AADAA-I9958074

**On managing continuous media data**

Author: Chang, Edward Yjhuei

Degree: Ph.D.

Year: 1999

Corporate Source/Institution: Stanford University (0212)

Adviser: Hector Garcia-Molina

Source: VOLUME 61/01-B OF DISSERTATION ABSTRACTS INTERNATIONAL.

PAGE 359. 170 PAGES

Descriptors: COMPUTER SCIENCE ; ENGINEERING, ELECTRONICS AND ELECTRICAL

Descriptor Codes: 0984; 0544

To deliver a large volume of continuous media data (i.e., video and audio) from a media server to a large number of simultaneous **clients** poses at least three challenges. First, the resources at the server side must be carefully allocated and scheduled to maximize throughput. Second, the server must deliver the data to the **client** just-in-time so that the **media** data in the **client**'s buffer neither overflows nor underflows. Third, the latency between the time when the data is **requested** and when the data is available for the **client** to **decode** and **playback** must be short to support interactive multimedia applications. To address these challenges, the conventional wisdom aims to minimize latency and maximize the utilization of the server's disk. My thesis addresses these challenges in three novel ways. First, contrary to the conventional wisdom, I show that spacing out IOs with delay may in fact lead to higher throughput, since **memory**, rather than disk, is the resource bottleneck of the media server. I show how to use **memory** judiciously and how to minimize the **per-stream** cost so that the throughput can be maximized. Second, I propose intelligent data placement and disk scheduling policies to minimize the initial latency of media data delivery. My analytical model shows that my schemes can bring the worst-case initial latency down to just a fraction of a second. I also **apply** these techniques to manage parallel disks efficiently. Finally, I design and implement a **client** side **Memory** and Disk Integrated **Cache** (MEDIC), which buffers the variability of the data delivery (due to VBR and potential channel disturbances) and supports time-shift VCR operations at the **client** side using the local disk. Through quantitative analysis, simulation and implementation, my work demonstrates that a smart media **client** using MEDIC complements a good media server design and that together they provide a complete end-to-end solution for managing continuous media data.

21/5/6 (Item 2 from file: 35)

DIALOG(R)File 35:Dissertation Abs Online

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01506010 ORDER NO: AADMM-07838

**IMPLEMENTATION AND PERFORMANCE ANALYSIS OF A MULTIMEDIA SYNCHRONIZER**

Author: BRIMONT, RENAUD MARCEL

Degree: M.A.SC.

Year: 1995

Corporate Source/Institution: UNIVERSITY OF OTTAWA (CANADA) (0918)

Adviser: NICOLAS D. GEORGANAS

Source: VOLUME 34/05 of MASTERS ABSTRACTS.

PAGE 2018. 128 PAGES

Descriptors: ENGINEERING, ELECTRONICS AND ELECTRICAL

Descriptor Codes: 0544

ISBN: 0-612-07838-8

Synchronization is a crucial problem for **distributed** multimedia systems and has been the subject of a great many research investigations at all levels of a multimedia system, and on several of their components concerned with the **issue** of synchronization: the databases, the communication system, the operating system, the documents, applications themselves. Indeed, in the case of multimedia presentational applications, an efficient management of communication resources and the eventuality of

having the data of different media types **stored on distributed media-storing** database servers requires the use of independent network connections for the **transmission** of each medium to a remote **workstation**

In this thesis, the implementation of a complete software synchronization control system for presentational application is described. In the target application--a News on Demand Application--a **user** wants to retrieve a multimedia document from a **distributed** database. Each medium present in the article is **stored** independently from the others and retrieved by its own media server. The synchronization among the media is achieved in two steps. Using a pre-defined scenario and QoS guarantees supported by ATM based virtual connections, a delivery schedule is derived and passed to each server, so that they can **transmit** the appropriate **media** subjects at the **scheduled** times, compensating for the delays and delay variations introduced by the network, and eventually the **decoders**. Additionally the **Stream** Synchronization Protocol (SSP) performs rescheduling operations at the **client** site to recover from jitters on the network and provide the **user** with a better and more acceptable service. The various components (database, **client** application, graphical interface) of this system, their software modules, and their interactions are described thoroughly. (Abstract shortened by UMI.)

21/5/7 (Item 3 from file: 35)  
DIALOG(R) File 35:Dissertation Abs Online  
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01465145 ORDER NO: AADAA-IMM00540  
**THE DESIGN AND IMPLEMENTATION OF A REAL- TIME MULTIMEDIA SYNCHRONIZATION CONTROL SYSTEM OVER HIGH-SPEED COMMUNICATIONS NETWORKS**  
Author: LI, LIAN  
Degree: M.A.SC.  
Year: 1994  
Corporate Source/Institution: UNIVERSITY OF OTTAWA (CANADA) (0918)  
Adviser: NICOLAS GEORGANAS  
Source: VOLUME 34/02 of MASTERS ABSTRACTS.  
PAGE 833. 123 PAGES  
Descriptors: ENGINEERING, ELECTRONICS AND ELECTRICAL ; COMPUTER SCIENCE  
Descriptor Codes: 0544; 0984  
ISBN: 0-315-00540-2

Synchronization is considered as a key **issue** in **distributed** multimedia systems. In a real- **time multimedia** presentation, data objects of different media types or coding formats are delivered from **distributed media-storing** servers to the remote **client** simultaneously over high-speed networks. The multiple **streams** need to be synchronized so that the multimedia document can be presented in the way specified by its creator. The synchronization research involves issues such as temporal relationship modeling, extending network protocols and supporting the implementation of applications where the synchronization control mechanisms integrate with other system functionality, such as the ATM network transmissions. The video coding/ **decoding** and the **distributed** database management.

In this thesis, we investigate a software synchronization control system for a target presentational application, i.e., a Multimedia News-on-demand service. Relying on the Quality of Services (QoS) supported by the ATM-based virtual connections, the system prevents major multi- **stream** mismatches through a delivery scheduling operation. Moreover, the synchronization errors brought by the inevitable network delay variations are recovered through a **Stream** Synchronization Protocol (SSP) in order to preserve the presentation quality. We **apply** the Time Flow Graph (TFG) to model the temporal relationships among the media components so that the scheduling and recovering operations can be efficient. Synchronization QoS parameters are employed in the SSP control. In addition, the differences between the characterization of coded and **uncoded** data **streams** are taken into account. We present a priority-based synchronization control for coded data, e.g., the MPEG-2 video **stream**.

For the implementation of such a control system, we elaborate a set of data structure specifications and algorithms. As well, we develop the software modules to implement the synchronization control prototype.

21/5/8 (Item 1 from file: 2)

DIALOG(R) File 2:INSPEC

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6404739 INSPEC Abstract Number: B1999-12-6135C-162, C1999-12-5260D-105

Title: **Rate control for non-real-time video encoding**

Author(s): I-Ming Pao; Ming-Ting Sun

Author Affiliation: Dept. of Electr. Eng., Washington Univ., Seattle, WA, USA

Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.3653, pt.1-2 p.509-17

Publisher: SPIE-Int. Soc. Opt. Eng,

Publication Date: 1998 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

SICI: 0277-786X(1998)3653:1/2L.509:RCRT;1-H

Material Identity Number: C574-1999-106

U.S. Copyright Clearance Center Code: 0277-786X/98/\$10.00

Conference Title: Visual Communications and Image Processing '99

Conference Sponsor: SPIE; Soc. Imaging Sci. & Technol

Conference Date: 25-27 Jan. 1999 Conference Location: San Jose, CA, USA

Language: English Document Type: Conference Paper (PA); Journal Paper (JP)

Treatment: Applications (A); Practical (P); Theoretical (T); Experimental (X)

Abstract: In **streaming** video applications, video sequences are **encoded** off-line and **stored** in a server. **Users** may access the server over a constant bit-rate channel such as public switched telephone network (PSTN) or integrated service digital network (ISDN). Examples of the **streaming** video are video on **demand**, archived video news, and noninteractive distance learning. Before the **playback**, part of the video bit-**stream** is pre-loaded in the **decoder** buffer to ensure that every frame can be **decoded** at the scheduled **time**. For these **streaming video** applications, since the delay (latency) is not a critical **issue** and the whole video sequence is available to the **encoder**, a more sophisticated bit-allocation scheme can be used to achieve better video quality. During the **encoding** process for **streaming** video, two constraints need to be considered: the maximum pre-loading **time** that the **video viewers** are willing to accept and the physical buffer-size at the receiver (**decoder**) side. In this paper, we propose a rate-control scheme that uses statistical information of the whole video sequence as a guide to **generate** better video quality for video **streaming** involving constant bit-rate channels. Simulation results show video quality improvements over the regular H.263 TMN8 **encoder**. (15 Refs)

Subfile: B C

Descriptors: **decoding**; distance learning; image sequences; ISDN; video coding; video on **demand**

Identifiers: nonrealtime video **encoding**; **streaming** video applications; video sequences; constant bit-rate channel; public switched telephone network; integrated service digital network; video on **demand**; archived video news; noninteractive distance learning; video bit-**stream**; **decoder** buffer; bit-allocation scheme; video quality; maximum pre-loading time; rate-control scheme; statistical information

Class Codes: B6135C (Image and video coding); B0120 (Education and training); B6430G (Video on demand and video servers); B6210M (ISDN); C5260D (Video signal processing); C7810C (Computer-aided instruction)

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21/5/9 (Item 2 from file: 2)

DIALOG(R) File 2:INSPEC

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6038054 INSPEC Abstract Number: B9811-6140C-176, C9811-5260B-136

**Title: A quick scene classification method based on compact encoding of video feature sequence**

Author(s): Nagasaka, A.; Miyatake, T.

Author Affiliation: Central Res. Lab., Hitachi Ltd., Kokubunji, Japan

Journal: Transactions of the Institute of Electronics, Information and Communication Engineers D-II vol.J81D-II, no.8 p.1831-7

Publisher: Inst. Electron. Inf. & Commun. Eng,

Publication Date: Aug. 1998 Country of Publication: Japan

CODEN: DTGDE7 ISSN: 0915-1923

SICI: 0915-1923(199808)J81DII:8L.1831:QSCM;1-T

Material Identity Number: M973-98009

Language: Japanese Document Type: Journal Paper (JP)

Treatment: Practical (P); Theoretical (T)

**Abstract:** We propose a real-time video scene classification method that memorizes features of continuously input videos simultaneously with detecting all the same scenes in the already input videos as the latest free-length scene. This method compresses the feature sequence of the videos in the average size of less than 20 bytes per second to memorize the features for a long time. And it takes less than 30 milliseconds on an average by a typical personal computer system to process one newly input frame image even though the computer stores the last 24-hour video features. Experiments applying to television broadcast showed that this method find correct pairs of the same scenes in realtime without detection miss. (11 Refs)

Subfile: B C

Descriptors: data compression; feature extraction; image classification; real-time systems; video coding

Identifiers: quick scene classification method; compact encoding ; video feature sequence; real-time video scene classification method; free-length scene; personal computer system; PC ; television broadcast ; 20 Byte/s; 30 ms; 24 h

Class Codes: B6140C (Optical information, image and video signal processing); B6120B (Codes); C5260B (Computer vision and image processing techniques)

Numerical Indexing: byte rate 2.0E+01 Byte/s; time 3.0E-02 s; time 8.6E+04 s

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21/5/10 (Item 3 from file: 2)

DIALOG(R) File 2:INSPEC

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5265933 INSPEC Abstract Number: B9606-6430-031, C9606-6150G-045

**Title: Development of Columbia's video on demand testbed**

Author(s): Chang, S.-F.; Eleftheriadis, A.; Anastassiou, D.

Author Affiliation: Dept. of Electr. Eng., Columbia Univ., New York, NY, USA

Journal: Signal Processing: Image Communication vol.8, no.3 p. 191-207

Publisher: Elsevier,

Publication Date: April 1996 Country of Publication: Netherlands

CODEN: SPICEF ISSN: 0923-5965

SICI: 0923-5965(199604)8:3L.191:DCVD;1-L

Material Identity Number: N528-96003

U.S. Copyright Clearance Center Code: 0923-5965/96/\$15.00

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P)

**Abstract:** This paper describes our progress in developing an advanced video-on-demand (VOD) testbed, which will accommodate various multimedia research and applications such as electronic news on demand, Columbia's video course network, and digital libraries. Two different prototypes have been completed. The first generation of the testbed was based on a constant bit rate (CBR) video server utilizing Ethernet delivery. Contents

were encoded and stored as MPEG-2 audio/video elementary streams . Software encoders / decoders were used in content generation and playback . The second generation of the testbed was enhanced with the capability of transmitting true MPEG-2 transport streams over the campus ATM network as well as the wide area NYNET ATM network. A real-time video pump and a distributed application control protocol (MPEG-2's DSM-CC) have been incorporated. Hardware decoders and set-tops are being incorporated to test wide area video interoperability. Our VOD testbed also provides an advanced platform for implementing proof-of-concept prototypes of related research. Our current research focus covers video transmission with heterogeneous quality-of-service (QoS) provision, video storage architecture design, content-based video indexing and browsing, multi-resolution (MR) video coding, efficient manipulation of compressed video, and advanced user interfaces. An important aim is to enhance interoperability. Accommodation of practical multimedia applications and interoperability testing with external VOD systems are currently being undertaken. (39 Refs)

Subfile: B C

Descriptors: asynchronous transfer mode; data compression; digital storage; graphical user interfaces; image resolution; information retrieval; interactive television; local area networks; multimedia communication; network servers; open systems; program testing; protocols; test equipment; video codecs; video coding

Identifiers: video on demand testbed; Columbia University; multimedia applications; constant bit rate; video server; Ethernet; MPEG-2; software encoders / decoders ; ATM; wide area network; real-time video pump; distributed application control protocol; DSM-CC; hardware decoders ; quality-of-service; video storage; compressed video; content-based video indexing; video browsing; multi-resolution video coding; user interfaces; interoperability

Class Codes: B6430 (Television equipment, systems and applications); B6210R (Multimedia communications); C6150G (Diagnostic, testing, debugging and evaluating systems)

Copyright 1996, IEE

21/5/11 (Item 1 from file: 95)

DIALOG(R)File 95:TEME-Technology & Management

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01366054 19991200030

#### **A novel replica placement strategy for video servers**

(Datenreplizierung fuer Videoserver)

Gafsi, J; Biersack, EW

Inst. Eurecom, Sophia Antipolis, F

IDMS 99, Interactive Distributed Multimedia Syst. and Telecommunication Services, 6th International Workshop, Proc., Toulouse, F, Oct 12-15, 1999

Lecture Notes in Computer Science, v1718, n1-3, pp321-335, 1999

Document type: Conference paper Language: English

Record type: Abstract

ISBN: 3-540-66595-1

ISSN: 0302-9743

#### **ABSTRACT:**

Mirroring-based reliability as compared to parity-based reliability significantly simplifies the design and the implementation of video servers, since in case of failure mirroring does not require any synchronization of reads or decoding to reconstruct the lost video data. While mirroring doubles the amount of storage volume required, the steep decrease of the cost of magnetic disk storage makes it more and more attractive as a reliability mechanism. In this paper a novel data layout strategy for replicated data on a video server is presented. In contrast to classical replica placement schemes that store original and replicated data separately, the approach stores replicated data adjacent to original data and thus does not require additional seek overhead when operating with disk failure. It is showed that the approach considerably improves the server performance compared to classical replica placement schemes such as

the interleaved declustering scheme and the scheme used by the Microsoft Tiger video server. The performance metric is the maximum number of **users** that a **video** server can **simultaneously** support (server throughput).

DESCRIPTORS: **CLIENT** SERVER SYSTEMS; **DISTRIBUTION** NETWORKS; PERFORMANCE ANALYSIS

IDENTIFIERS: VIDEO SERVER; Netzwerk-Server; Video-on- **Demand** ; Leistungsanalyse

21/5/12 (Item 2 from file: 95)  
DIALOG(R) File 95:TEME-Technology & Management  
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00888101 E95054297062

**Variable bit rate MPEG video storage on parallel disk arrays**  
(MPEG-Videospeicherung auf parallelen Platten-Arrays mit variabler Bitrate)  
Chang, E; Zakhor, A  
Univ. of California, Berkeley, USA  
Proc. of the 1994 1st Int. Workshop on Community Networking, Integrated Multimedia Services to the Home, San Francisco, USA, Jul 13-14, 1994/1994  
Document type: Conference paper Language: English  
Record type: Abstract  
ISBN: 0-7803-2076-X

ABSTRACT:

In this paper the authors discuss issues related to the storage and retrieval of Variable Bit Rate (VBR) MPEG video data on parallel disk arrays for multiple simultaneous **users**. The authors **store** data blocks corresponding to constant real-time **playback** duration. Because of the VBR characteristics and the constant bandwidth read channel, disk overload occurs at peak usage periods. The strategy to deal with disk overload is to temporarily stop service to low-priority **users**. To do so, the authors propose a number of classes of service corresponding to various probabilities of loss, during which time service is suspended. Thus, a major problem is estimating probability of loss or suspension so that a video server system can guarantee service with actual loss probabilities that do not exceed the specified thresholds at the call setup time. The authors propose three techniques for computing loss probabilities: histogram convolution, Central Limit Theorem, and Cramer's rule. The authors present an efficient placement strategy and an optimal admissions control strategy that guarantees loss probability thresholds while maximizing the number of **requests** that can be satisfied at all qualities. The authors extend these ideas to encompass scalability by allowing appropriate frames in the MPEG- **encoded** data to be dropped without fully suspending service to any one **user**. This allows the system to make intelligent choices in gracefully degrading the **request** data rates during periods of peak usage. Finally, the authors test the data placement and admissions control algorithms with a discrete event disk array system simulator and show that the results are in accordance with theoretical predictions.

DESCRIPTORS: DATA STORAGE; DATA COMPRESSION; DATA SIGNALLING RATE; **VIDEO TRANSMISSION** ; REAL **TIME** METHOD; IMAGE CODING; DATA **MEMORY** ; DATA ANALYSIS; ALGORITHM; SIMULATORS; EXPERIMENTAL RESULTS; BANDWIDTH--FREQUENCY ; DEVELOPMENTAL TREND; SYSTEM SIMULATION; CONTROL ENGINEERING; IMAGE RECONSTRUCTION; LOSS PROBABILITY  
IDENTIFIERS: Videobild; Datenspeicherungstechnik

26/5/1 (Item 1 from file: 8)  
DIALOG(R) File 8: Ei Compendex(R)  
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05811811 E.I. No: EIP01204959160

**Title:** Zero-delay broadcasting protocols for video -on- demand  
**Author:** Paris, Jehan-Francois; Long, Darrell D.E.; Mantey, Patrick E.  
**Corporate Source:** Univ of Houston, Houston, TX, United States  
**Conference Title:** Proceedings of the 1999 7th International Multimedia Conference - ACM MULTIMEDIA '99  
**Conference Location:** Orlando, FL, USA **Conference Date:** 19991030-19991105  
**Sponsor:** ACM  
**E.I. Conference No.:** 56197  
**Source:** Proceedings of the ACM International Multimedia Conference & Exhibition 1999. ACM, New York, NY, United States  
**Publication Year:** 1999  
**CODEN:** 002179  
**Language:** English  
**Document Type:** CA; (Conference Article) **Treatment:** A; (Applications); G; (General Review)  
**Journal Announcement:** 0105W2

**Abstract:** Broadcasting protocols for video -on- demand continuously retransmit videos that are watched simultaneously by many viewers. Nearly all broadcasting protocols assume that the client set-top box has enough storage to store between 48 and 60 minutes of video. We propose to use this storage to anticipate the customer requests and to preload, say, the first 3 minutes of the top 16 to 20 videos. This would provide instantaneous access to these videos and also eliminate the extra bandwidth required to handle compressed video signal. We present two broadcasting protocols using partial preloading to eliminate this extra bandwidth. The first of these protocols, Polyharmonic Broadcasting with Partial Preloading (PHB-PP), partitions each video into between 20 and 160 segments of equal duration and allocates a separate data stream to each individual segment. Our second protocol, the Mayan Temple Broadcasting protocol, uses fewer data streams but requires more overall bandwidth. (Author. abstract) 14 Refs.

**Descriptors:** Multimedia systems; Video on demand; Network protocols; Television broadcasting; Video signal processing; Bandwidth; Image compression; Image segmentation

**Identifiers:** Zero-delay broadcasting protocols; Pyramid broadcasting  
**Classification Codes:**

723.5 (Computer Applications); 716.4 (Television Systems & Equipment); 716.1 (Information & Communication Theory); 723.2 (Data Processing)

723 (Computer Software, Data Handling & Applications); 716 (Electronic Equipment, Radar, Radio & Television)

72 (COMPUTERS & DATA PROCESSING); 71 (ELECTRONICS & COMMUNICATION ENGINEERING)

26/5/2 (Item 2 from file: 8)  
DIALOG(R) File 8: Ei Compendex(R)  
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05383336 E.I. No: EIP99104833068

**Title:** Study on scheduling multiple priority requests in multimedia servers  
**Author:** Kamel, Ibrahim; Niranjana, T.  
**Corporate Source:** Panasonic Information and Networking Technologies Lab, Princeton, NJ, USA  
**Conference Title:** Proceedings of the 1999 6th International Conference on Multimedia Computing and Systems - IEEE ICMCS'99  
**Conference Location:** Florence, Italy **Conference Date:** 19990607-19990611  
**Sponsor:** IEEE CS; IEEE Circuit and Systems Society  
**E.I. Conference No.:** 55370  
**Source:** International Conference on Multimedia Computing and



Systems-Proceedings v 2 1999. p 395-399

Publication Year: 1999

CODEN: 002114

Language: English

Document Type: JA; (Journal Article) Treatment: A; (Applications)

Journal Announcement: 9911W3

**Abstract:** **Multimedia** servers store large amount of **media** data of different format. Different data objects have **different** real time requirements. In this paper, we present an empirical study on the performance of disk scheduling in the presence of different **media** type with **different** real-time requirements. We also argue that using multiple queues to handle different data types is not the best way to handle objects with different priorities. Moreover we argue that using one queue per disk to organize objects with **different** real time requirements would be more suitable for **multimedia** server applications. We built a simulation model based on a real **video** server, PanaViss, produced by Panasonic. The experiments show that using multiple queues respects the priority hierarchy. However, this schema sometime penalizes utilization of the disk. (Author abstract) 15 Refs.

**Descriptors:** **Client** server computer systems; **Multimedia** systems; Scheduling; Algorithms; Data storage equipment; Queueing networks; Real time systems; Asynchronous **transfer** mode; Computer simulation

**Identifiers:** **Multimedia** server; Disk scheduling

**Classification Codes:**

722.4 (Digital Computers & Systems); 723.5 (Computer Applications);

722.1 (Data Storage, Equipment & Techniques); 716.1 (Information & Communication Theory)

722 (Computer Hardware); 723 (Computer Software); 716 (Radar, Radio & TV Electronic Equipment)

72 (COMPUTERS & DATA PROCESSING); 71 (ELECTRONICS & COMMUNICATIONS)

26/5/3 (Item 3 from file: 8)

DIALOG(R) File 8: Ei Compendex(R)

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05348361 E.I. No: EIP99094767249

**Title:** **Capacity requirements of video servers in broadcast television facilities**

**Author:** Kwong, Ying Ki; Cvetko, John

**Corporate Source:** Tektronix, Inc, Beaverton, OR, USA

**Source:** SMPTE Journal v 108 n 7 1999. p 477-480

**Publication Year:** 1999

**CODEN:** SMPJDF **ISSN:** 0036-1682

**Language:** English

**Document Type:** JA; (Journal Article) **Treatment:** T; (Theoretical)

**Journal Announcement:** 9910W2

**Abstract:** Digital **video** servers are rapidly being adopted in **broadcast transmission** facilities where new materials must be **cached** to these servers, usually from tape **media** or, possibly, from **media** in an archival system. To deal with the finite capacity of these servers (usually with hard disk **media**), old materials must be purged. In this process, materials of **different time duration** are handled. Increasingly, materials with different data rates are also handled because of the use of different compression standards, compression ratio, and (with the advent of digital television (DTV)) different uncompressed data rates and formats. Since the cost of **video** server storage is significant, understanding the time-dependent requirements of server storage capacity is important for system-level planning. A good understanding helps avoid wasteful provisioning of storage capacity without sacrificing operational flexibility. This paper presents a model that should be useful for planning or analyzing capacity requirements of **video** servers. Implications of the model for systems handling primarily long-form materials, such as near-**video-on-demand** (NVOD) applications will be examined. (Author abstract) 6 Refs.

**Descriptors:** **Television broadcasting**; Digital television; **Client** server computer systems; Data compression; **Video on demand**; Bandwidth

Identifiers: Digital video servers; Near-video-on-demand (NVOD)  
Classification Codes:  
716.4 (Television Systems & Equipment); 722.4 (Digital Computers & Systems); 716.1 (Information & Communication Theory)  
716 (Radar, Radio & TV Electronic Equipment); 722 (Computer Hardware)  
71 (ELECTRONICS & COMMUNICATIONS); 72 (COMPUTERS & DATA PROCESSING)

26/5/4 (Item 4 from file: 8)  
DIALOG(R) File 8: Ei Compendex(R)  
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04343814 E.I. No: EIP96023029299

**Title: Synchronization of multimedia data for a multimedia news-on-demand application**

Author: Lamont, Louise; Li, Lian; Brimont, Renaud; Georganas, Nicolas D.  
Corporate Source: Communications Research Cent, Ottawa, Ont, Can  
Source: IEEE Journal on Selected Areas in Communications v 14 n 1 Jan 1996. p 264-278  
Publication Year: 1996  
CODEN: ISACEM ISSN: 0733-8716  
Language: English  
Document Type: JA; (Journal Article) Treatment: A; (Applications)  
Journal Announcement: 9604W1

**Abstract:** In this paper, we present a complete software control architecture for synchronizing multiple data streams generated from distributed media - storing database servers without the use of a global clock. Independent network connections are set up to remote workstations for multimedia presentations. Based on the document scenario and traffic predictions, stream delivery scheduling is performed in a centralized manner. Certain compensation mechanisms at the receiver are also necessary due to the presence of random network delays. A stream synchronization protocol (SSP) allows for synchronization recovery, ensuring a high quality multimedia display at the receiver. SSP uses synchronization quality of service parameters to guarantee the simultaneous delivery of the different types of data streams. In the proposed architecture, a priority-based synchronization control mechanism for MPEG-2 coded data streams is also provided. A performance modeling of the SSP is presented using the DSPN models. Relevant results such as the effect of the SSP, the number of synchronization errors, etc., are obtained. (Author abstract) 26 Refs.

**Descriptors:** Synchronization; Information services; Data communication systems; Computer software; Computer architecture; Database systems; Computer workstations; Telecommunication services; Telecommunication traffic; Computer simulation

**Identifiers:** Multimedia; News on demand service; Stream synchronization protocol

**Classification Codes:**  
716.1 (Information & Communication Theory); 903.4 (Information Services); 722.3 (Data Communication, Equipment & Techniques); 723.5 (Computer Applications); 723.3 (Database Systems)  
716 (Radar, Radio & TV Electronic Equipment); 903 (Information Science); 722 (Computer Hardware); 723 (Computer Software)  
71 (ELECTRONICS & COMMUNICATIONS); 90 (GENERAL ENGINEERING); 72 (COMPUTERS & DATA PROCESSING)

26/5/5 (Item 5 from file: 8)  
DIALOG(R) File 8: Ei Compendex(R)  
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04343801 E.I. No: EIP96023029286

**Title: Synchronization representation and traffic source modeling in orchestrated presentation**

Author: Raghavan, S.V.; Prabhakaran, B.; Tripathi, Satish K.  
Corporate Source: Indian Inst of Technology, Madras, India  
Source: IEEE Journal on Selected Areas in Communications v 14 n 1 Jan

1996. p 104-113

Publication Year: 1996

CODEN: ISACEM ISSN: 0733-8716

Language: English

Document Type: JA; (Journal Article) Treatment: G; (General Review)

Journal Announcement: 9604W1

**Abstract:** **Multimedia** applications comprise several **media streams**, which are semantically synchronized at **different time** instants. The application behavior is **stored** along with the **multimedia** database using representation mechanisms such as OCPN (object composition Petri nets) or dynamic timed Petri nets (DTPN). It is imperative that one translates the application behavior to the corresponding schedulable entities, such as packets, so that the performance engineering of any system can be done, using the traffic model arising out of the (**media** related) application behavior as opposed to individual **media** level behavior. This requires that a function be defined, which takes the **stored** temporal representation as input and produces packets as output, preserving the semantic relationships among the **streams**. We propose a methodology based on probabilistic, attributed context free grammar (PACFG) to address this **issue**. We demonstrate the appropriateness of this methodology by **applying** it to the OCPN/DTPN representation of a typical **multimedia** application vis-a-vis orchestrated presentation. (Author abstract) 14 Refs.

**Descriptors:** Data communication systems; Synchronization; Telecommunication traffic; Data structures; Database systems; Petri nets; Context free grammars; Computer networks; **User** interfaces; Computational linguistics

**Identifiers:** Orchestrated **multimedia**; Object composition Petri nets; Dynamic timed Petri nets; Schedule entities; Semantic relationships; Probabilistic attributed context free grammar

**Classification Codes:**

722.3 (Data Communication, Equipment & Techniques); 716.1 (Information & Communication Theory); 723.2 (Data Processing); 723.3 (Database Systems); 921.4 (Combinatorial Mathematics, Includes Graph Theory, Set Theory); 721.1 (Computer Theory, Includes Formal Logic, Automata Theory, Switching Theory, Programming Theory)

722 (Computer Hardware); 716 (Radar, Radio & TV Electronic Equipment); 723 (Computer Software); 921 (Applied Mathematics); 721 (Computer Circuits & Logic Elements)

72 (COMPUTERS & DATA PROCESSING); 71 (ELECTRONICS & COMMUNICATIONS); 92 (ENGINEERING MATHEMATICS)

26/5/6 (Item 6 from file: 8)

DIALOG(R) File 8: Ei Compendex(R)

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04241486 E.I. No: EIP95092839913

**Title:** Demand **paging** for video **-on-** demand **servers**

**Author:** Ozden, Banu; Rastogi, Rajeev; Silberschatz, Avi; Martin, Cliff  
**Corporate Source:** AT&T Bell Lab, Murray Hill, NJ, USA

**Conference Title:** Proceedings of the International Conference on Multimedia Computing and Systems

**Conference Location:** Washington, DC, USA **Conference Date:** 19950515-19950518

**Sponsor:** IEEE

**E.I. Conference No.:** 43487

**Source:** International Conference on Multimedia Computing and Systems-Proceedings 1995. IEEE, Los Alamitos, CA, USA, 95TH8066. p 264-272

**Publication Year:** 1995

**CODEN:** 002114

**Language:** English

**Document Type:** CA; (Conference Article) **Treatment:** A; (Applications); T; (Theoretical)

**Journal Announcement:** 9510W5

**Abstract:** With recent advances in storage and network technology it is now possible to provide **video on demand** (VOD) service, thereby eliminating the inflexibility inherent in today's **broadcast** cable

systems. A VOD server is a computer system that **stores videos** in compressed digital form and provides support for the **concurrent transmission of different** portions of the compressed **video** data to the various **viewers**. In this paper, we present novel **demand paging** algorithms that provide rate guarantees while utilizing the limited buffer space effectively and eliminating the disk bandwidth limitation. Our schemes, therefore, increase the number of **clients** that can be serviced concurrently. A VOD server, which is based on our schemes, is currently being implemented at AT&T. (Author abstract) 14 Refs.

Descriptors: Computer systems; Digital image storage; Data communication systems; **Television broadcasting**; Cable television systems; Algorithms; Buffer storage; Random access storage; Image compression; Telecommunication services

Identifiers: **Demand paging**; **Video on demand servers**; **Video data**  
Classification Codes:

722.4 (Digital Computers & Systems); 722.1 (Data Storage, Equipment & Techniques); 722.3 (Data Communication, Equipment & Techniques); 716.4 (Television Systems & Equipment); 921.6 (Numerical Methods); 723.2 (Data Processing)

722 (Computer Hardware); 716 (Radar, Radio & TV Electronic Equipment); 921 (Applied Mathematics); 723 (Computer Software)

72 (COMPUTERS & DATA PROCESSING); 71 (ELECTRONICS & COMMUNICATIONS); 92 (ENGINEERING MATHEMATICS)

Set	Items	Description
S1	6013191	CLIENT? OR VIEWER? OR USER? OR STANDALONE OR STAND()ALONE - OR PC OR PCS OR PERSONAL()COMPUTER? OR WORKSTATION? OR WORK()- STATION? OR NODE?
S2	7596744	REQUEST? OR ASK OR ASKS OR ASKED OR ASKING OR PETITION? OR CALL() (ON OR UPON) OR QUER? OR QUESTION? OR INQUIR? OR DEMAND? OR REQUISITION OR APPLY OR APPLYING
S3	6046773	CAPTUR? OR MEMORY OR CACHE? OR STORE? ? OR STORING OR SAVE OR SAVING OR KEEP? ? OR KEEPING
S4	4940625	(TV OR TELEVISION OR RADIO) () (SHOW? OR PROGRAM? OR BROADCA- ST?) OR MEDIA()ASSET? OR VIDEO? OR AUDIO? OR MULTIMEDIA OR ME- DIA
S5	10926284	TIME OR SCHEDULE? OR PERIOD OR DURATION OR SIMULTANEOUS? OR CONCURRENT?
S6	392166	ENCOD??? OR DECOD??? OR ENCRYPT??? OR CIPHER? OR CYPHER? OR DECRYPT? OR CYPHERTEXT OR ENCYPHER? OR UNCOD? OR UNENCRYPT? - OR ENCIPHER? OR UNCOD? OR DECIHER? OR UNCYPHER? OR UNCYPHER? - OR CYPTO?
S7	8450235	PUBLISH? OR ISSUE OR DISPURS? OR DISTRIBUT?
S8	6831948	DIFFERENT OR ANOTHER OR SEPARATE OR TARGET
S9	9068480	TRANSFER? OR STREAM? OR SEND? OR TRANSMIT? OR TRANSMISSION OR GENERAT? OR PLAY? OR BROADCAST?
S10	15713	S1 (S) S2 (S) S3 (S) S4
S11	192343	S8 (3N) S5
S12	24820	S11 (S) S9
S13	150	S10 (S) S12
S14	22	S13 (S) S6
S15	11	S14 NOT PY>1999
File	15:ABI/Inform(R)	1971-2003/Jun 02 (c) 2003 ProQuest Info&Learning
File	810:Business Wire	1986-1999/Feb 28 (c) 1999 Business Wire
File	647:CMP Computer Fulltext	1988-2003/May W2 (c) 2003 CMP Media, LLC
File	275:Gale Group Computer DB(TM)	1983-2003/Jun 02 (c) 2003 The Gale Group
File	674:Computer News Fulltext	1989-2003/May W4 (c) 2003 IDG Communications
File	696:DIALOG Telecom. Newsletters	1995-2003/Jun 02 (c) 2003 The Dialog Corp.
File	98:General Sci Abs/Full-Text	1984-2003/Apr (c) 2003 The HW Wilson Co.
File	583:Gale Group Globalbase(TM)	1986-2002/Dec 13 (c) 2002 The Gale Group
File	47:Gale Group Magazine DB(TM)	1959-2003/May 28 (c) 2003 The Gale group
File	624:McGraw-Hill Publications	1985-2003/May 30 (c) 2003 McGraw-Hill Co. Inc
File	636:Gale Group Newsletter DB(TM)	1987-2003/May 29 (c) 2003 The Gale Group
File	484:Periodical Abs Plustext	1986-2003/May W4 (c) 2003 ProQuest
File	813:PR Newswire	1987-1999/Apr 30 (c) 1999 PR Newswire Association Inc
File	613:PR Newswire	1999-2003/May 30 (c) 2003 PR Newswire Association Inc
File	16:Gale Group PROMT(R)	1990-2003/Jun 02 (c) 2003 The Gale Group
File	160:Gale Group PROMT(R)	1972-1989 (c) 1999 The Gale Group
File	141:Readers Guide	1983-2003/Apr (c) 2003 The HW Wilson Co
File	553:Wilson Bus. Abs. FullText	1982-2003/Apr (c) 2003 The HW Wilson Co

15/3,K/3 (Item 3 from file: 674)  
DIALOG(R) File 674:Computer News Fulltext  
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061136

**Beyond browsing, Netscape Communicator 4.0 unites the enterprise**

Byline: Howard Millman

Journal: Computerworld Page Number: 71

Publication Date: August 04, 1997

Word Count: 957 Line Count: 96

**Text:**

**SUMMARY:** A comprehensive suite of integrated Web applications suitable for use in **stand - alone** , remote and networked environments. Advanced **users** can customize Communicator's appearance and behavior, and novices can use it right out of the box...

... you with an abundance of new groupware, collaboration, Internet access, site design and central administration features. And **users** of previous Netscape browsers can step in to the new version without returning to college. Version 4...

... **PROFILE** The ``profiles'' feature takes some of the headache out of dealing with systems shared by multiple **users** . Each **user** gets a personal profile that remembers their bookmarks, newsgroups, electronic-mail address books and messages. Communicator's...

... of Netscape's popular browser; Messenger, a successor to Netscape Mail and a much-improved E-mail **client** ; and Collabra, Netscape's technology for real-time participation in internal company discussion groups and Usenet newsgroups...

... creates and publishes Web pages; and Netcaster, a ``push'' technology that transports selected information to the desktop. **Another** of Netscape's **time** -savers, SmartUpdate, helps speed the installation of browser plug-ins. Of the two components in Netscape Conference...

... whiteboard saves more time than Internet telephony wastes. Conference does an excellent job of setting up Internet **audio** conferences, but the application is still hampered by the Internet's marginal **audio** quality and the extra nuisance involved in Internet-based **audio** . But it can eliminate long-distance telephone charges. Communicator's Professional edition includes Netscape Calendar, which schedules meetings and tracks group events, and IBM's Host On- **Demand** , which enables 3270 emulation and mainframe connectivity. Netscape's AutoAdmin will let network administrators centrally manage and update networked **PCs** . Every time a **user** launches Communicator, it **queries** a central configuration file. If the values have changed, the **user** is **asked** if he wants to update his machine's configuration. Lightweight Directory Access Protocol (LDAP) support lets **users** **query** multiple network, extranet and X.500 LDAP-compliant directories. Messenger's improvements make it a worthy competitor...

... full-screen viewing. Support for Post Office Protocol 3, Internet Message Access Protocol 4 and Simple Mail **Transfer** Protocol assure compatibility with all major mail systems. Support for Secure/Multipurpose Internet Mail Extensions **encryption** provides peace of mind for organizations that want to take advantage of the Internet's global reach and low cost to exchange information. Small but welcome features include a spell checker and **user** -defined rights that determine how much access a Java applet can have to the **client** computer's resources. Support for HTML messaging enables you to **send** an HTML- or text-formatted message to a recipient. That can help reduce the number of messages...

... message or attachment file size. Netscape's newsgroup application, Collabra, is well integrated with Messenger. Collabra supports **store** and forward discussions over a network, intranet and Usenet groups. Composer, an HTML authoring tool, also improves...

... broad-based improvements in the way people and machines communicate. It provides an excellent solution for advanced **users** and administrators. Communicator's redesigned interface and fluid interapplication integration makes it an excellent choice to use...

15/3,K/4 (Item 4 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
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056078

Invisible protection  
Computerworld Telecom Journal

Security for carrier is in the eye of the beholder. But new forms of encryption and biometric technology are cutting to the core, providing barriers that prevent fraud and unauthorized access

Byline: Pat Blake  
Journal: Computerworld Page Number: T6  
Publication Date: November 01, 1996  
Word Count: 2619 Line Count: 240

Text:

...added network features. There are some security products, though, that require very active involvement from the end **user**. Internet access provider GridNet International, for instance, uses a biometric security system to thwart intruders. The Atlanta...

... by The National Registry, Inc. A scan is made of the customers' fingerprints, and the image is **stored** as a unique method of authentication for access to databases. That same image can be **encrypted**, digitized and used to activate secure **transmission** across WorldComm's asynchronous **transfer** mode (ATM) network. Such products are the basis of a generic three-pronged approach to security: authentication to determine that the person **requesting** entry is who he purports to be; authorization to give approval to be in the system at...

... level because that basic need for safety will have been addressed. Ignoring the need will not only **play** into the hands of the bad guys but could ultimately bring interactive communications to its knees. In...

... around the world right from computer terminals without much information about what actually goes on behind that **PC**, how the traffic is routed and what safeguards are in place. That distinction continues to blur with...

... going toward a broadband-type network proposal. And the cable systems are getting away from delivering just **TV programming** and into delivering Internet service and phone service over their broadband network," said Mike Powers, manager of...

... equipment that does not have any form of security built in," Owens continued. "The existing system basically **asks** a subscriber to provide its identity without performing any kind of verification. The system was designed that...

... designed with an embedded element of security. The digital method of signaling is itself a form of **encryption** because of the coded way in which the signal is **transmitted**. For example, the digital switch initiates the processing of an incoming call that is then sent to the base station. That base station **sends** a coded frequency that is unique to the receiving phone on that particular channel. The phone then **decodes** the signals and **sends** an acknowledgment back to the base station, and the call is processed. But the cellular industry has...

... subscriber attempts to make a call, the network reads the phone's electronic serial number and then **sends** it a random number. The phone uses the cryptographic algorithm to ...service is denied. And since the correct response is a function of the random number the network **transmits**, the authorizing code will be **different** each **time**. "With every call, the phone would respond with a different password," Owens said. The

process of issuing dynamic passwords is transparent to subscribers but is nearly impervious to hackers because of the difficulty in **capturing** the code. To harness fraud, carriers must also upgrade existing customers' phones and sell only phones that...

... point-to-point protocol (PPP) link. In the first level, called PPP authentication protocol (PAP), a clear, **unencrypted** text password is sent between two devices at the ends of a point-to-point link. For example, a Cisco Systems, Inc. router might **send** a password to another router and say, "Here's my password. Do you know who I am..."

... same process as PAP except that it offers a higher degree of security because the password is **encrypted**. Remote Possibilities While cellular carriers have security hurdles to overcome, the increasing **demand** for remote network access is placing similar challenges in front of data transmissions, on wireless and landline...

... that aim to rise to the challenge. The company manufactures a communications product called SafeNet that combines **encryption** to scramble transmissions, making them unintelligible to intruders, with authentication via random passwords and digital signatures. The...

... One of the aspects of our technology, which is in our product, is an intelligent form of **encryption** that focuses on compatibility with computer networks such as the Internet or X.25. It works with...

... beyond the compact size. IRE products incorporate one of the strongest and most widely used forms of **encryption**, called the data **encryption** standard, and follow the security standards for banking and government uses. It's no surprise, then, that...

... espionage and the value of systems that prevent theft of data. As corporations migrate from mainframes to **client** /server- and World Wide Web-based systems, their networks are more distributed. The same information that was... using Cisco boxes and packet filtering technologies. Carriers look to companies such as Cisco to help them **keep** their businesses secure and their customers safe from the grasp of network intruders. It is part of...

... on gaming events. Global Casino brings blackjack and slot machines to the desktop. Both are running with **play** money to give the **user** a feel for the game while Intersphere beta tests the product. In the very near future, though, **players** will be anteing up out of their own pockets to **play** the book, which resides for legal reasons on the island of Grenada in the Caribbean ( **users** would set up accounts in Grenada and **transfer** funds directly to their gambling accounts). As with other forms of electronic commerce, Intersphere had to deal with the perception that online purchasing is risky business. "Generally, people worry about **sending** their credit-card information across the Internet," said Michael Oryl, president of Intersphere. "Even with nonsecure browser technology, in my eyes it's safer to **send** a credit card over an open link on the Internet than it is to call a random camera **store** in New York and place a credit-card order over the phone. You're dealing with employees..."

... passes that data by in a couple hundred milliseconds, which makes it much harder for somebody to **capture** it. "You have to filter every bit of packet of information that's going across, looking for..."

... secure than things that are generally accepted now," Oryl added. For the sports book, Intersphere uses an **encryption** scheme that is used on data passed back and forth between the **client** application, which is typically a Web browser, and Wise Guy's service-side application. "The servers that..."

... the security that is incorporated with the Web server. With Global Casino, Intersphere adds another layer of **encryption** called Diffie-Hellman, a public key form of cryptography used in a new product called Presence that...



... on a redundant array of inexpensive computers" that provides the horsepower needed for the high level of **encryption** - 128-bit, said Jim Daleen, president of the company. "Nothing is 100% secure. Anybody that thinks so...

15/3,K/5 (Item 5 from file: 674)  
DIALOG(R) File 674:Computer News Fulltext  
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043610

...it's an adventure

With three major design alternatives and exotic vendor implementations to boot, the virtual backbone planning process is not just a job. . .

Byline: Steven S. King

Journal: Network World Page Number: 49

Publication Date: April 10, 1995

Word Count: 2442 Line Count: 229

Text:

... years. The goal of virtual LANs is conceptually quite simple: to provide high-speed connectivity for LAN **users**, guarantee low end-to-end propagation delay and reduce administrative overhead. The choice of a virtual LAN backbone technique will **play** a central role in the net's performance. Virtual LANs are supposed to connect arbitrary groups of LAN **users** at wire speeds, but without a suitable backbone between LAN switches, virtual LAN performance will fall off as **user demands** increase and the backbone topology grows. LAN switch suppliers appear to have split into three camps, each with a different model for virtual LAN backbones today - parallel cabling, proprietary shared **media** and Asynchronous **Transfer Mode**. Each of these backbone approaches has its strengths and weaknesses, particularly in the areas of scalability...

... employed, traffic within a virtual LAN has its own physical path, so switches will have no problem **keeping** virtual LAN floods, **broadcasts** and unicasts separated on their own cables. While this virtual LAN approach is simple and free of...

... backbones discussed below will recommend parallel cabling with either 10M or 100M bit/sec Ethernet links. Shared **media** To avoid the complexity and cost of parallel-cable virtual LANs, many switch vendors have devised their own methods of **keeping** track of virtual LAN traffic on a single shared- **media** backbone cable, whether it is 100M bit/sec Ethernet or Fiber Distributed Data Interface. These proprietary techniques may sound bizarre, but they are necessary to overcome the limits of nonchannelized **media** in the virtual LAN environment. There are four major approaches to extending virtual LANs over high-speed shared **media**: time-division multiplexing (TDM), signaling messages, frame tagging and subnet IDs (see chart, page 55). Retix is...

... Inc. and LANNET, Inc. are both taking a similar angle on FDDI and 100M bit/sec shared- **media** virtual LAN backbones by giving switches the ability to exchange proprietary signaling messages that convey virtual LAN information. In the signaling model, switches **send** one **another** short messages each **time** a new station shows up on the network. Messages indicate to which virtual LAN the new **media** access control (MAC) address corresponds. For instance, when a station **sends** its first frame, the local switch notes the MAC address and the port to which the station is connected. The port indicates the virtual LAN on which the station resides. The switch then **sends** other switches a several-byte message containing the new station's MAC address and its virtual LAN...

... traffic starts to flow. Compared with TDM, signaling messages have the advantage of working on standard shared- **media** internetworks with de-vices from other vendors. On the downside, signaling requires a fair amount of buffering and processing effort just to **keep** switches aware of new endstations. This method also runs the risk of switch tables becoming

nonsynchronized if signaling is disrupted. To avoid this, switches periodically **send** one another their entire tables. As with the Routing Information Protocol, table exchange can eat a significant...bandwidth without the need for time-division or other logical channelization. Frame tagging The third major shared- **media** backbone model for virtual LANs, frame tagging, is used by Xylan Corp. and LANNET on FDDI and other high-speed LANs. Frame tagging **keeps** track of virtual LAN traffic by adding a short (4-byte) header to each frame that traverses...  
... learning process (see story, this page). Frame tagging lets multiple virtual LANs freely share a single shared- **media** cable. But, as usual, there are trade-offs: Frame tagging can exceed the maximum allowed frame length...

... maximum al- lowed length after frame tagging, Xylan switches will automatically fragment the frame into legal lengths, **send** them across the backbone and reassemble the fragments at the other end. Fragmentation makes frame tagging transparent...

...layer. This is accomplished by appending a security header to each frame containing fields that can identify **encryption** techniques, security groups and related appli- cation-defined security information. Also, 802.10 includes a fragmentation and...

... 802.10 to virtual LANs by using the frame tags to convey virtual LAN identifiers across shared- **media** backbones. Although 802.10 is not supported by other vendors, it po- tentially could allow virtual LANs...

... LAN switches that create virtual subnets do not need frame tagging, signaling or TDM to exploit shared- **media** backbones. In subnet virtual LANs, the standard subnet ID in each frame serves a dual role. For traffic within virtual LANs, it serves as a virtual LAN identifier, telling switches where floods and **broadcasts** should go. For traffic be- tween virtual LANs, the subnet ID serves its usual function as a...

... be manually configured through an arbitrary mesh network. This greatly enhances the flexibility and scalability of shared- **media** virtual LANs because all virtual LANs don't have to share the same end-to-end paths...

...networks. ATM backbones for virtual LANs ATM has some decided advantages over parallel cable and proprietary shared- **media** virtual LAN backbones. Even if a network has no ATM endstations, ATM may still be the best... techniques. Many virtual LAN switch vendors are in the process of exploiting ATM by adding an ATM **User** -to-Network Interface (UNI) to their products. UNI support allows direct connection to ATM backbone switches. Some...

... so the most viable switched virtual network products will provide high levels of support for both shared- **media** and ATM virtual LAN backbones. In the realm of the largest vendors, Cisco is further along than Bay Networks in terms of executing a plan that integrates ATM and shared- **media** virtual LAN backbones into switch products. Cisco's promise of seamless integration of ATM virtual LAN backbones and 802.10 shared- **media** virtual LANs could put it in a leadership position in switched virtual networking. However, Cisco is having...

...platforms. For instance, Bay Networks LAN switches and ATM backbones are all managed by the Optivity graphical **user** interface. Backbone bets As business applications increasingly require low-delay, high-bandwidth connectivity, switched virtual LANs will...

...measured approach for network designers would be to experiment initially with parallel-cable virtual LANs, use shared- **media** virtual LANs in the near term, and finally migrate to ATM backbones in the long term. Ultimately...

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**VENDORS EVOLVE FOR NEW MARKETS**

ELECTRONIC MESSAGING NEWS

March 18, 1998 VOL: 10 ISSUE: 6 DOCUMENT TYPE: NEWSLETTER

PUBLISHER: PHILLIPS BUSINESS INFORMATION

LANGUAGE: ENGLISH

WORD COUNT: 1219

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**TEXT:**

As the E-mail market matures, **users** are looking beyond issues such as installation to more complex ~ and more significant ~ ones such as security...

...information. For example, integration with calendars and other messaging systems gives vendors new opportunities and **users** new benefits.

Yet integration raises **questions** as systems become more complex and administrators must stay on top of an expanding array of devices...

...on the

technology. Additionally, governments in Europe and elsewhere have limitations on the use of strong **encryption** in software, so even if the United States were to ease restrictions on exporting security solutions, import...

...in my view security vendors must make the technology easier for corporations to deploy and for people **sending** E-mail to use.

EMN: What are the challenges corporations face with E-mail management?

DeBello: The...

...rich content in E-

mail with standards like HTML. If you couple that with the fact that **users** can now **send** any type of file as an E-mail attachment, the complexity of the messages sent has...should administrators react?

DeBello: Administrators of E-mail systems must also react to the requirements of their **users**. Different people use E-mail in different ways and managers must provide **users** with appropriate solutions. For example, our Eudora E-mail **clients** support two Internet standards, POP3 [Post Office Protocol] and IMAP4 [Internet Message Access Protocol]. POP3 is based on retrieving the mail from the server and **storing** it on a local computer. IMAP4 is a server-based system. For some **users** POP3 is the best method for retrieving E-mail; for others IMAP4 is the better choice. E-mail managers must design their systems to suit the needs of their **users**.

EMN: What about other devices, such as cellular phones and personal data assistants?

DeBello: Finally, as **users** access their E-mail from devices other than computers corporations must design their E-mail systems accordingly...

...EMN: What will be the dominant trend for electronic messaging in 1998?

DeBello: Integration of voice and **multimedia** into E-mail will become more prevalent in 1998. Standards such as HTML will allow a much richer E-mail experience for **users**. We have recently added HTML support into our Eudora product, which not only allows the exchange of...to a web page or attach that schedule to an E-mail message and E-mail my **schedule** to **another** person. With the

Internet standards that are being created, that person could then drag that information onto...

...using the same program as I am. (Jim DeBello, QUALCOMM, 619/587-1121, <http://www.qualcomm.com>.)

**Player Profile**  
Jim DeBello

Professional Background: Joined QUALCOMM [QCOM] in 1996 as vice president and assistant general manager...

15/3,K/10 (Item 1 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
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04144304 Supplier Number: 54374091 (USE FORMAT 7 FOR FULLTEXT)

**AUDIO NOTES.**

Audio Week, v11, n15, pNA

April 12, 1999

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 2617

... sales and said it expected first-quarter profit to grow beyond 20% target. March sales at RadioShack **stores** rose to \$297 million from \$255.3 million on 15% gain in same- **store** sales. For first 3 months of year, sales climbed 14% to \$766.3 million on 13% gain in same- **store** sales. At same time, Tandy reported in proxy for May 20 annual meeting that Pres.-CEO Leonard...

...be in- and out-of- warranty servicer for its wireless phone products, As part of agreement, RadioShack **stores** will carry Motorola wireless phone accessories including batteries, headsets, leather cases. March Retail Sales Reports: Good Guys...

...year earlier, and for 6 months, increased 3% to \$513.2 million from \$499.4 million. Same- **store** sales edged up 1% for quarter but were flat for first half... Tweeter Home Entertainment sales for first quarter jumped 14.2% to \$62.2 million from \$54.5 million as same- **store** sales rose 1%, excluding results of Houston-based Home Entertainment chain, which Tweeter acquired Feb. 1 and...

...Jeffrey Stone said Home Entertainment inventory purchase orders were "mistakenly cancelled" by previous management instead of being **transferred** to Tweeter: "This caused us some sales problems in February and the first week of March." But...

...digital television." As with other chains, McGuire said Tweeter was hurt by shortages of lower-end DVD **players**. Nevertheless, he said DVD hardware revenues soared 100% from same quarter year earlier. Latest blemish on sanctity...

...DVD-807 was preceded by Internet leaks on how to change code with deck's remote control. **Player** is \$400 Region-2 Europe version of DVD-907 sold in Region 1 N. America. Information wasn't...

...decks to make code "totally inaccessible to consumers." "Advancing the Art of Sound" is theme of 107th **Audio** Engineering Society (AES) convention Sept. 24-27, Javits Convention Center, N.Y. -- 212-661-8528. CD Warehouse halted sales of Disc Go Round (DGR) franchises less than year after buying 134- **store** chain from Grow Biz International for \$7 million, chain said in annual report. CD Warehouse will honor...

...Court that sought temporary injunction in alleging that CD Warehouse had breached franchise agreement by allowing DGR **stores** to "encroach" on its development area. Court rejected **request** for temporary injunction, but

Jimick has filed arbitration **demand** with American Arbitration Assn. (AAA). At same **time** , CD Warehouse filed **separate request** with AAA charging that Mark Kane and Compact Disc International had violated noncompete clause in 1996 asset purchase agreement. Claim seeks damages and 300,000 shares of CD Warehouse common owned by Kane. NCT **Audio Products** is using MTV Campus Invasion Tour to launch MTV-branded flat speakers introduced at last Las...

...U.K.-based NCT on flat-panel speaker technology. NCT said in 10-K report that NCT **Audio** on Feb. 9 expanded 18-month-old cross- licensing pact with NCT to include aftermarket "ground-based first-quarter revenue. He said company expects positive results from new **audio** subsidiaries such as DistributedMedia.com, which he described as **media** company that uses Internet to deliver music programming and billboard ads to "out-of-home venues." NCT...

...by Zenith at CEMA spring conference in Washington. Company said ATSC Remodulator IC translates output of DVD **player** , set-top box or other digital device to digitally modulated signal that's compatible with RF inputs...

...said. Chip samples are available now, with volume production set for midyear. Toshiba acquired 5% stake in **Audiovox** Communications Corp. (ACC) for \$5 million. ACC, subsidiary of **Audiovox** Corp., buys some of its cellular phones from Toshiba and has long history with company. Companies tangled...

...efforts to conserve electricity in CE products. Panasonic has 300 products that qualify for rating, including DVD **players** , **audio** receivers, minicomponent stereos. Company said 97% of its 1998 unit sales were Energy Star- compliant, compared with...

...says has greater longevity. Memorex said extra 6 min. on CD-R compared with music CD benefits **users** making individual compilations. New alloy that combines high reflectivity of silver with corrosion-resistance of gold yields...

...their reflectivity, it said. Chinese-designed Dolby Digital receiver will use Zoran's ZR38601 chip for Dolby **decoding** , company announced. New Dolby Digital AV receiver hails from Xiamen Xianin Electronics, among country's largest OEMs...

...China, manufacturer said. More Japanese CE makers are relocating or expanding R&D functions overseas. Kenwood recently **transferred** home **audio** development and design to wholly owned Malaysian plant to cut time between design and manufacturing. Matsushita, which makes CD pickups in Singapore, shifted relevant **audio** equipment planning there last fall. Sharp plans to **transfer** AV planning to its Malaysian plant and double engineering staff there by next year. Sansui's first...

...fever hasn't escaped LP turntable category. New publication titled The LP Is Back! is available from **Audio Amateur** (888-924-9465). It's collection of articles from analog LP's heyday, compiled to give...

...maintenance. Aiwa stereo TVs in 13" and 20" size designed to complement company's Mini Theater digital **audio** systems will ship in June, following delivery of same-size hi-fi stereo TVCRs in May. Company...

...to 20" (\$300) and 13" (\$250) include side-firing speakers and presets that optimize picture for movies, **videogames** , viewing in subdued light. **Videogame** function command on remote control automatically selects front-panel inputs where console typically is connected and activates...

...based Trio Electronics, founded in 1946. It entered autosound field in 1980, challenging earlier entry by home **audio** rival Pioneer. DVD rentals at Blockbuster's U.K. chain have been extended to 140 **stores** from 30 in market test begun last Oct. Program provides 2-night rental of Toshiba DVD **player** for \$16 with 2 free loaner movies; additional DVD rentals cost \$5 daily. DVD disc production will...

...LCD screen; Internet View Cam, digital camcorder with Internet access; TVs and set-top boxes with digital **broadcast** reception. Sharp MiniDisc (MD) portable with digital signal processor for 13 different listening ... and is less than 1" thick. Various music modes can be selected by large jog- dial, and **player** has backlit LCD display. Sharp said 40-sec. **memory** buffer prevents skips, and **playtime** is 13-1/2 hours with rechargeable lithium-ion battery, 23 hours with addition of AA alkaline...

...it to be used as reflective-type display with no backlight in bright outdoor settings, or as **transmission** -type display that uses backlight for dim indoor settings. IEEE 1394-based device that functions as cable modem and interface for home **multimedia** network has been developed by NEC. Company said its Smart Cat home gateway will enable home **PCs** to download **audio** , **video** and data at high speeds from Internet and provide subsequent distribution to digital storage and display devices inside home without need for LAN or Ethernet routing. System has 400 Mbps data **transfer** rate and will be field-tested this year for compatibility with other IEEE-1394 devices, NEC said...

15/3,K/11 (Item 2 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
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04133800 Supplier Number: 54264658 (USE FORMAT 7 FOR FULLTEXT)

**NOTEBOOK.**

Consumer Electronics, v39, n13, pNA

March 29, 1999

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 4270

(USE FORMAT 7 FOR FULLTEXT)

**TEXT:**

...more than 30 titles monthly tagged with phone number for customers to enter drawing for Sony DVD **player** . Besides awarding deck to 2 **viewers** monthly, retailers that rented DVDs to winners also get Sony **player** . Pool of DVD titles for rental in Europe is expected to deepen later this year, Columbia TriStar...

...and-date releases with VHS there is hoped to stem trade in Region 1 U.S. discs **played** on modified decks. But recent catalog from U.K. mail order house McNo offered long list of...

...over CD-I distribution from Philips when latter dropped software for interactive format. In Japan, meanwhile, top **video** rental chain Culture Convenience Club has expanded DVD rentals to 800 of its 950 outlets, from test begun in 2 Tokyo **stores** in Dec. 1997. Retailer said rentals doubled to 1,200 in Dec. in pilot **stores** from year ago. However, spokesman said DVD **player** rentals had declined, indicating increase in installed base. DVD rental titles in Japan are available from Pioneer...

...granted Sega worldwide nonexclusive license to use its Force Feedback Steering technology in arcade games and home **videogame** systems. Sega in turn has given Atari nonexclusive worldwide license for its "voice changeover" technology. Atari also...

...that its Force Feedback Steering technology has received Japanese Patent Grant, effective through Jan. 10, 2010. Smart **videogame** consoles with **videophone** , Internet and voice- control capabilities are goal of govt.-sponsored research by Japan's Ministry of International...

...is among likely participants, along with Hitachi, NEC, Toshiba. Meanwhile, Sega said it will set up Internet **videogame** site for its Dreamcast console in Japan in summer. Site will offer Mahjong, card games and other...

...quickly and at low cost in move designed to leverage Dreamcast's

Internet access and thereby expand **user** base, Sega said. Company said it has yet to decide whether it will charge **users** to **play**. Sega also is proceeding with plans to make Dreamcast home games compatible with its arcade games. **Players** can train wrestlers from upcoming arcade game on Dreamcast console at home, then **store** moves in console's removable Visual **Memory** cartridge for use in arcade machines. Konami said it plans similar arcade system compatible with mobile **memory** card from Sony **PlayStations**. DVD publishing and DTV programming joint venture will be launched soon by Toshiba and Japanese publishing giant...

...s books and magazines on DVD for sale to consumers and develop digital programming for sale to **broadcasters**. Partners said content also might be distributed via Internet. Consumer **encoders** for Dolby Digital surround sound system have been developed separately by Matsushita and Pioneer. Technology will enable upcoming home recorders using DVD, **PC** hard disc or other **media** to record **audio** in multichannel digital format from **broadcast** or online sources, companies said. Each said its processor complies with Dolby Digital Consumer **Encoder** (DDCE) standard, meaning that incoming **audio** is compressed to 1/3-1/10 of original data to produce bitstream that can be **decoded** by current Dolby Digital circuits in DVD **players**, home theater receivers and processors, as well as digital TVs using U.S.- developed ATSC standard. Dolby Digital also is surround sound format adopted by U.S.-based satellite **TV** **programmers** and most theatrical productions. Matsushita said its single-chip **encoder** will be available in sample quantities by year-end at \$56. Pioneer didn't announce delivery or pricing. Compared with professional Dolby Digital **encoders**, consumer versions need less processing power and voltage. Alliance Entertainment said it will use AT&T secure digital distribution system as core of plan to deliver music, **video** and DVD via Internet. AT&T technology, called a2b music, will provide secure digital downloads and **streaming audio** capability from Alliance Web site. Digital IC recorder just 2" long and 1/8" thick goes on...

...from Toshiba. Voice Bar Pro DMR-SX1 (about \$279) weighs 3 oz. and uses 8 Mbyte Smart **Media** flash **memory** to record up to 132 min. dictation. Toshiba said it plans to ship 5,000 monthly. **Audiovox** nearly doubled first-quarter income as sales shot up 74% (see financial table) on strength of increased...

...phones and improved economies in Southeast Asia, company said. Earnings rose despite \$2.9 million decline in **audio** sales and drop in economically troubled Venezuela. Communications group, which includes wireless phones, more than doubled sales...

...of sales to AirTouch, Bell Atlantic, GTE and others and will rise to 65% by year end, **Audiovox** Communications Corp. Pres.-CEO Philips Christopher said. Company plans to ship Toshiba-built CDMA phone in April...

...phone for international market that currently accounts for 13% of overall revenues. In automotive electronics, which includes **audio**, sales edged up to \$39 million from \$35.2 million. Downturn in **audio** sales was attributed largely to reworking of licensing agreement with Kmart to "focus on a few key models," Automotive Electronics Div. Senior Vp Patrick Lavelle said. Sales of mobile **video** products including in-car LCDs rose to \$8.2 million from \$1.1 million as Nissan program...

...extended to 3rd quarter and BMW was added to roster, he said. Nissan extension is projected to **generate** \$8-\$10 million in added revenues. CD Warehouse halted sales of Disc Go Round (DGR) franchises less than year after buying 134- **store** chain from Grow Biz International for \$7 million, chain said in annual report. CD Warehouse will honor...

...Dist. Court that sought temporary injunction in alleging that CD Warehouse breached franchise agreement by allowing DGR **stores** to "encroach" on its development area. **Request** for temporary injunction was rejected, but Jimick has filed arbitration **demand** with American Arbitration Assn. (AAA). At same **time**, CD Warehouse filed **separate request** with AAA alleging that Mark Kane and Compact Disc International violated noncompete clause in 1996 asset purchase...

...4 million for year, with U.S. accounting for 79% of revenues, international market rest. Distributor Valley **Media**, which has filled orders for CDNow since 1994, accounted for 85% of online company's cost of sales in year ended Dec. 31. CDNow-Valley **Media** agreement expires in June. First 9" TVCR (\$380) from Panasonic is 2-head model that runs on...

...2 billion acquisition of Learning Co. (LC) Proposed purchase, announced in Dec., would merge Mattel's Barbie **multimedia** titles with Learning Co.'s stable of Reader Rabbit children's **PC** titles. At same time, Learning Co., in what is likely to be its last earnings report as...

...company said. Set-top notes: UniView has introduced upgraded version of set-top box that adds DVD **player** and is based on Motorola's **Streamaster** platform. UniView 310 boosts **memory** of 210 model to 32 SDRAM from 8, increases size of hard drive to 3.2 Gb from 1.1 Gb, has 300 MHz Intel Celeron processor. Device also adds MPEG-2, Dolby Digital **audio** support, PCI slots. It will be targeted at commercial market including hotels and hospitals, with pricing topping...

...build majority of joint venture's set-top boxes, with production to begin in 4th quarter. DVD **player** output in China will be expanded by Panasonic parent Matsushita this year. Company said buildup is effort to reduce **player** costs there and gain competitive advantage before Chinese manufacturers receive DVD licenses. Matsushita said it will invest \$4.2 million at plant of subsidiary in Dalian, China, and increase production to 70,000 **players** this year from 8,000 last year. Besides finished decks, subsidiary will make 200,000 DVD mechanisms...

...decision to boost DVD production there is result of flagging VCR sales in country where MPEG-1 **Video CD players** dominate home **video** market. Overall market for DVD **players** is expected to reach 500,000 in China this year, it said. It's first Japanese CE company to manufacturer finished DVD **players** there. Pioneer supplies components to plant in Shanghai for local assembly, as does Hitachi in Taiwan. **Video CD (VCD)** will be springboard for online interactive services in China, now that Microsoft has cut deals under which Chinese manufacturers will build Windows CE operating system into MPEG-1 disc **players**, making them inexpensive set-top Web browsers. Leading charge is microprocessor maker C- ...Windows CE-capable units later this year, including domestic giant Legend Computers and Taiwan-based Acer. VCD **players** and **standalone** set-tops will have inputs for keyboards and joysticks and will display online content on conventional TVs. Separately, Microsoft signed agreement with Hong Kong Telecommunications to deliver **videogames** and full-motion **video** movies through telco's fiber network. Recordable DVD in DVD-RAM format will go on sale in...

...convert 2 of 5 production lines to handle Wega as well as existing 32" TV and 19" **PC CRTs**. First 32" line will be converted in May, 19" in June. Revamped lines can be switched...

...production within 24 hours. "The flexibility of the lines will allow us to react quickly to market **demand**," Senior Sony Display Device Vp Kenji Tanaka said. Factory will continue manufacturing 20-27" TV tubes and 17" **PC CRTs**. Sony has spent \$100 million over last 5 years expanding plant, including \$60 million to add 19" **PC CRTs** in July 1997. Internet Notes: Internet-based movie retailer Reel.com is providing its upcoming DVD release schedule to When.com calendar **users**. When.com is free Internet calendaring service that delivers personalized, comprehensive event information to online **users** who then can integrate data directly into personal or group calendar. Service automatically tracks events and alerts ...

...to all events that might be important to them (including concerts, sports events, Web events). When.com **users** also can take advantage of Reel.com's DVD preorder feature... Web site MP3.com announced it will use software developer **AudioSoft**'s new BackOffice system to track royalty payments due for music downloads... New **media** content developer MediaX said its live Web cast of Rod Stewart's Charlotte, N.C., show in...



...it will spend \$100-\$125 million repointing subscribers' dishes in 1999-2000 if wins approval for license **transfer** for new slot. Rent-A-Center (RAC), carrying more than \$800 million in debt in connection with...

...million of preferred common to Apollo Management. With purchase, RC more than tripled size to 2,156 **stores**, including 324 franchisees. "Our ability to repay or refinance our current debt depends on our financial and ...

...809.7 million in revenues in 1998, followed by appliances at 19%. Whirlpool products were top revenue **generators** at 14.5% of total, with Magnavox next at 13.4%. Service Merchandise (SM) late Fri. said...plans to file for voluntary bankruptcy protection by month's end. Group of 5 vendors had filed **petition** for seeking to force SM into involuntary bankruptcy protection March 15 saying they were owed \$8.2...

...Mawr, HiFi Buys and Home Entertainment as part of strategy to expand from New England base. Rex **Stores**, benefiting from \$2.4 million sale of real estate, reported 4th-quarter income rose to \$7.8...

...through investment in synthetic fuel partnership, Rex posted earnings of 70 cents per share, analysts said. Same- **store** sales fell 3%. Downturn in 4th-quarter sales was result in part of closing of 10 Sun TV and Campo Electronics **stores** that cut into Rex revenues, Chmn.-CEO Stuart Rose told analysts in conference call. Both Sun and Campo liquidated **stores** in quarter. "We chose not to chase their prices," Rose said. For year ended Jan. 31, Rex said income jumped 51% as sales inched up 1% (see financial table). Chain will open 10-15 **stores** this year and has added Maytag appliances to merchandise mix, Rose said. It also is projecting **generating** \$2.5 million through sale of tax credits. To bolster image, Rex has hired St. Louis-based...

...now we're working on marketing," he said. Sega could spend \$17 million to develop Shenmue role- **playing** game for Dreamcast console, press reports in Japan said. Game development is being directed by Sega executive...

...million copies of Shenmue, but said he didn't believe success of Dreamcast depends on title. Role- **playing** game is said to feature 500 characters and 1,200 rooms, with seamless transitions between movie and animation sequences. Impasse on used-game sales in Japan has been settled. **Videogame** market-share leader Enix has agreed to let retailers sell used games in exchange for copyright fee...

...games released in Japan after Tomb Raider 3, which made debut March 4. Although sale of used **videogames**, CDs and **videos** is routine in U.S., Japanese retailers don't have protection of U.S. First-Sale Doctrine...

...to serve broadband and high-speed Internet customers. Spinner.com is offering free co-branded Web-based **streaming** music **player**, FacePlates, providing customized features for different broadband services. Company said it has had "great success" with narrowband...

...It cited Forrester Research report that said more than 20,000 porn sites exist in U.S. **Streaming video** and sound clips to promote movies, **videogames** and music sold online are available to retailers from **Video Pipeline** service. Haddonfield, N.J.-based company said it has 7,500 movie previews, 10,000 music **videos** and 2,500 **videogame** previews that electronic retailers can add to their Websites. Proprietary system doesn't require special software on consumers' or retailers' **PCs**. Spots can be scaled for modem connections greater than 25 kbps, with motion **video** smoother at higher speeds but nonetheless sharp and with crisp **audio** at any connection, **Video Pipeline** said. Service is priced on per-view basis to be affordable to retailers of any size, company said. Movie-based **videogames** will be arriving at retail soon -- and hit **video** games will make transition ...64 "probably" in May, Activision spokeswoman said. Companies said game features constantly evolving "living world" in which **players** take on role of ant Flik, main character in film. Pricing hasn't been announced. Meanwhile, movie...

...from silicon and monitor to silver halide and screen is likely to continue. Movie based on Sony **PlayStation** hit game Final Fantasy will be distributed in U.S. by Sony's Columbia-TriStar movie affiliate...

...29.98, with one film on each side of disc. Release date coincides with Arrival II's **video** rental debut. Title stars Patrick Muldoon and will be supported by Artisan's Platinum Choice copy depth...

...Stephen King's The Stand (TVD March 1 p12). Recordable CD format is picking up momentum in **PC** market as built-in rather than add-on. Hewlett-Packard has begun including internal rewritable CD (CD-RW) drives in new HP Pavilion **PCs** . It said positive reaction from consumers for its external CD-RW drive was main factor in decision to include build-in drive now. Meanwhile, Sony is extending CD-R format to portable **PCs** . It said its compact CRX50A (about \$665) weighs 7 oz. and is 15 mm thick. Bundled software...

Set	Items	Description
S1	218	REPLAYTV OR TIVO OR (PERSONAL OR DIGITAL)()VIDEO()RECORDER? OR DIGITAL()NETWORK()RECORDERS OR SMART()TV OR VIDEO()RECORD- ING()COMPUTER? OR TIME()SHIFTED()TELEVISION OR HARD()DISK()RE- CORDER?
S2	3	PERSONAL()TELEVISION()RECEIVER? OR TELEVISION()PORTALS OR - ON()DEMAND()TV
S3	221	S1 OR S2
S4	43	S3 NOT PY>1999
S5	18	S4 NOT PD>19990211
S6	18	RD (unique items)

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**COOL NEW STUFF CUTTING-EDGE INNOVATIONS SEEK BUYERS**

San Jose Mercury News (SJ) - Sunday, January 10, 1999

By: MIKE LANGBERG AND JON HEALEY, Mercury News Staff Writers

Edition: Morning Final Section: Computing + Personal Tech Page: 1F

Word Count: 2,657

**MEMO:**

International Consumer Electronics Show

CORRECTION: SETTING THE RECORD STRAIGHT (publ. 1/12/99, pg. 2A) An article on Page 1F of Sunday's Computing + Personal Tech section quoted analyst Richard Doherty of the Envisioneering Group regarding sales of new digital televisions without providing the full context of his remarks. Doherty's estimate of 2,500 to 3,000 sets sold in 1998 refers only to high-definition television sets, which are capable of displaying the most richly detailed digital pictures. The Consumer Electronics Manufacturers Association estimates that more than 13,000 digital sets of all kinds were sold last year.

**TEXT:**

LAS VEGAS - DIGITAL technology is really changing the way we live.

Any doubters would have struggled to maintain their denial at the massive International Consumer Electronics Show, which ends its four-day run here today.

The 90,000 who gathered for the annual gadget-fest saw a sweep of new products, from the spectacular to the mundane, being re-made with silicon chips, from flat-panel televisions selling for more than \$10,000 to \$69 wall clocks that set themselves to the correct time by receiving radio signals.

In recent years, CES has become something of a proving ground for digital ideas. Companies display new products in gaudy booths on the floor of the Las Vegas Convention Center and nearby hotels, hoping retailers will decide to stock them and journalists will give them exposure.

This is big business. The Consumer Electronics Manufacturers Association of Arlington, Va., which organizes the show, estimates consumer electronics sales in the United States will hit \$79 billion this year, up 5 percent from \$76 billion in 1998. That's \$1,000, on average, for every American household.

The lure of high-tech upgrades is even keeping sales strong in mature categories. Americans, for example, are expected to buy 50 million telephones this year and 28 million television sets.

Here's a look at some of the digital designs drawing attention at this year's show. For those who want even more, you can become a virtual attendee through the CES Web site ([www.CESweb.org](http://www.CESweb.org)).

**Digital television**

Thinner, flatter and wider -- but not more affordable, at least not yet.

That's the picture for digital television, as more than a dozen manufacturers showed off pricey new models at CES. To tune in and watch the digital broadcasts, offering dramatically sharper pictures and better sound than conventional analog TV, consumers still have to plunk down \$5,000 or more.

It's no surprise, then, that DTV sets aren't selling in big numbers. Broadcasts only started last fall in the Bay Area and a few other big cities. Analyst Richard Doherty of The Envisioneering Group in Seaford,

N.Y., estimates only 2,500 or 3,000 sets were sold in 1998.

The models on display this year were mainly big-screen, rear-projection sets, such as Toshiba's 65-inch, Philips' 64-inch and Hitachi's 61-inch models. Their formats ranged from wide-screen high definition television, or HDTV, which offers photographic images with fine details and rich color, to standard definition television, which has a crisper picture than today's analog sets, but no more detail.

To ease some of the sticker shock, many of the models do not have a digital tuner built in. They can display conventional TV signals without problem, but need a separate receiver to tune in digital signals.

The idea is to let buyers wait for a later generation of digital receiver that will cost less than the first models, which cost from about \$1,500 to \$5,000. And there were signs that prices were, in fact, falling: Thomson, for example, demonstrated a digital receiver that can tune in both over-the-air and DirecTV satellite broadcasts. It is expected later this year for \$649.

Panasonic demonstrated a new receiver, due in late 1999, that has more features and works with a greater variety of monitors than its current \$1,600 box, yet is expected to sell for \$600 less. With other manufacturers' prices dropping, however, Panasonic's \$999 digital receiver could still be the most expensive on the market next Christmas, a Panasonic spokesman observed.

#### Need for a standard

The need for lower prices isn't the only drawback. Set-makers have yet to settle on a standard for connecting a digital receiver to a monitor, so one manufacturer's receiver may not work with another manufacturer's display.

Nor is there much evidence yet that display costs are coming down. Instead of offering less expensive screens, many of the set makers showed off more costly ones based on new technologies.

These included plasma monitors thin enough to hang on a wall and liquid crystal display (LCD) screens, the same technology found on laptop computers. Many of the models were prototypes, and only some were capable of displaying an HDTV picture.

The plasma monitors from Philips, Panasonic, Pioneer, Toshiba, Sanyo, Sharp, Zenith and Thomson, which ranged from prototypes to production models, were priced at \$11,000 and up. The LCD screens -- none of which has a price or availability date -- included 43-inch and 50-inch diagonal wide-screen monitors from Samsung that can be mounted on tabletops, and a rear projection set from Sharp that features a new technology aimed at brightening and sharpening the contrast of the screen.

Coming down from the stratosphere, officials at Thomson -- which makes RCA, GE and ProScan sets -- pledged to bring out two direct-view models by Christmas 1999 that will be far more affordable than any other HDTV sets on the market. They did not disclose prices for the 34-inch and wide-screen 38-inch sets, however, other than to say they will be well below Sony's \$9,000, 34-inch direct-view set.

Sony, meanwhile, trundled out its biggest screen ever: a 65-inch diagonal rear-projection digital set, available in the spring for about \$12,000.

#### Interactive TV

Digital technology is also making television less of a passive viewing experience.

Two leading providers of small-dish satellite TV service in the United States -- DirecTV and EchoStar, operator of The Dish Network -- announced

plans to add interactivity and digital recording capabilities to their services in 1999.

In the second quarter of 1999, DirecTV officials said, they will incorporate technology from Wink Communications of Alameda into their receivers, enabling viewers to call up additional text and graphics or order products related to the programs they're watching.

And, by the end of the year, a new DirecTV receiver from Philips will include digital recording technology from **TiVo** Inc. of Sunnyvale, letting viewers pause, replay or delay live programming as if it were on tape. The **TiVo** service, which may carry an additional fee, also records programs and advertisements for viewers based on their tastes.

This spring, EchoStar officials said they will start selling a new receiver developed with the help of Microsoft's WebTV. In addition to digital-recording functions similar to **TiVo**'s, the receiver will enable users to obtain information from the Internet at extremely high speeds. If the user wants information on demand from the Internet or the ability to send e-mail, the new EchoStar box can provide that, too -- for an extra monthly fee, payable to Microsoft.

Toshiba, meanwhile, demonstrated three new analog TV sets with built-in Wink technology. Available later this month, the sets -- which range from a 36-inch model for \$1,700 to a 55-inch set for \$2,700 -- enable viewers to call up text and graphic enhancements added by selected broadcasters, including NBC, ESPN and the Weather Channel.

Thomson announced its plan to develop an interactive TV with Microsoft Corp., which recently bought a 7.5 percent stake in the company. The TV will include the Windows CE operating system and some WebTV technology, but it won't mimic the Internet-on-TV functions of WebTV, said James E. Meyer, chief operating officer of Thomson. Instead, once broadcasters settle on a standard way to encode text, graphics and supplemental video clips into their programs, the set will let viewers display those enhancements.

Unlike WebTV, Thomson's ETV will not carry a monthly service fee.

#### Home networking

This year's show, like the even bigger Comdex computer trade show two months ago, spotlighted new, easy-to-install home computer networks for people who need to move data around the house. The home-network market is considered fertile ground as an increasing number of families buy second and third PCs, and more information converts to digital format.

On display were devices that use phone lines, power lines, radio waves and special digital cables to move information, with capacities ranging from 1 megabit per second to 88 megabits. Those capacities are increasing steadily, hastening the arrival of networks that can transmit multiple channels of video throughout the home.

How much of the public actually needs or wants a home network remains to be seen. Analysts suggest one of the driving forces will be the arrival of low-cost, high-speed Internet access, a phenomenon that has yet to reach most U.S. homes.

#### Telephones

No longer are telephones dumb devices that merely ring to summon their owners.

Uniden America Corp. of Ft. Worth, Texas, showed its new Long Distance Manager cordless phone at CES. Due in July with two models at \$49 and \$79, the Long Distance Manager looks like other 900 megahertz cordless phones, except for an L.D. button. Pushing this button before making a long-distance call automatically triggers a service that searches a database of rates from more than 60 long-distance carriers and selects the

lowest at that given moment.

The service is free to consumers, other than the cost of the calls themselves, and adds no more than half a second to the process of completing a call. A company named CallManage, which provides the service for Uniden, makes its money by taking a tiny cut of the payments to the long-distance companies with which it has negotiated deals.

Command Communications Inc. of Aurora, Colo., is just starting to ship PrivateTime, a \$139 device offering a new way to be shielded from unwanted calls. PrivateTime lets owners pick a four-digit code for sharing with family and friends. All incoming calls are then routed to the answering machine, but those who enter the code make the phone ring -- so anyone who doesn't have the code, from telemarketers to the owner's boss, won't ever be able to interrupt.

#### Automobiles

Our cars are increasingly a home away from home, and we'll soon have more opportunity than ever to take along every kind of electronic appliance.

Several companies were showing car systems with dashboard display screens for everything from satellite navigation to electronic mail.

One of the most ambitious concepts came from Panasonic Consumer Electronics Co. of Secaucus, N.J.: a \$3,200 system, due in May, for showing DVD movies with full surround-sound. The CX-DV1500 fits into a dashboard like a standard CD player, but also plays DVDs. A seven-inch-diagonal LCD display screen for mounting in the back seat area -- TV screens are thankfully illegal in the front seat of cars in the United States -- provide passengers with the picture, while a Dolby Digital processor pipes skin-tingling bass notes throughout the vehicle.

#### Home Security

The Internet is already an established way for people to stay in touch with each other across time and distance. But now the Net is about to become a watchdog.

Several home security companies are touting inexpensive video cameras that plug into a personal computer and send images to absent homeowners via electronic mail or posting to World Wide Web pages.

One example is MicroSentinel from Security Data Networks Inc. of Cary, N.C., due in March for \$699. The package includes a base station that plugs into a Windows PC and a security camera, about the size of a paperback book, with a wireless connection to the base station. Extra cameras are \$250 each.

For \$19.95 a month, MicroSentinel buyers can have images automatically transmitted from the cameras through the base station into a PC and posted onto a World Wide Web site maintained by Security Data Networks. Subscribers can then log onto the Web site from anywhere, at any time, and check the most recent 1,000 images taken by their home security cameras.

The MicroSentinel system even has a built-in motion detector. If movement is detected above a threshold level set by the user, the system can do one of two things: send a pager message to the user, or send out an e-mail message with the camera's most recent picture as an attached file.

#### Personal health care

Digital technology is also making it less expensive and easier to keep track of your health.

Omron Healthcare Inc. of Vernon Hills, Ill., recently shipped its Body

Logic Pro, a \$149 device that gives an instant reading of body fat. Users enter their height, weight, age and gender into a keypad on the face of the Body Logic Pro, then grip two metal-covered handles. The device sends an undetectable electric current through the body and calculates what percentage is fat -- adult men are generally regarded as healthy at 12 to 20 percent bodyfat, while healthy adult women range from 18 to 25 percent.

According to an Omron spokesman, body fat is a more important health statistic than total weight. A successful diet and exercise program, for example, might actually cause a slight increase in total weight as fat is replaced by muscle.

For keeping track of cardiovascular status, Mark of Fitness Inc. in Shrewsbury, N.J., has just started selling its \$129 model MF-72 wristwatch-style blood pressure and pulse monitor. A fabric cuff slips over the hand onto the lower arm, holding a small box with display screen. The only controls are a start and stop button for taking readings; there's also an electronic memory that holds up to seven readings for two people.

Clocks and watches

Even humble timepieces were getting a new look at CES.

Casio Computer Co. of Tokyo showed what it called the world's first wristwatch with a built-in receiver for the Global Positioning System (GPS). The five-ounce watch should start selling in Japan within a few months for about \$600, and is due in the United States by year-end. A display screen on the watch, just under a square inch, shows longitude and latitude numbers accurate within 100 feet, based on data received from orbiting GPS satellites. The watch can also function as a kind of high-tech compass; at the beginning of a wilderness hike, for example, wearers can mark their position in the watch's memory, and the watch will subsequently tell them which direction to take to get back to that point.

Chaney Instrument Co. of Lake Geneva, Wisc., was displaying its line of Acu-Rite wall clocks that use a small radio receiver to get the precise time -- within a fraction of a second -- from a signal transmitted nationwide by the federal government from Ft. Collins, Colo. The clocks, introduced late last year and priced around \$69, spin their hands quickly forward when first activated to get to the right time, and run for as long as two years on a single AA battery. By summer, the company is promising a line of watches for about \$100 that also get the precise time by radio.

CAPTION:

Photos (5)

PHOTO This was the year of expensive high-definition televisions at the Consumer Electronics Show. This is a 64-inch rear-projection model from Philips Electronics.

(990110 CO 1F)

PHOTO Manuela Simonelli of Paris examines a digital video camera. She was among the tens of thousands attending the electronics extravaganza.

(990110 CO 4F)

PHOTO Uniden's phone equipped with Long Distance Manager selects the cheapest carrier on each long-distance call made.

(990110 CO 5F)

PHOTO Casio plans to release a watch that receives signals from the Global Positioning System, displaying precise location within 100 feet.

(990110 CO 5F)

PHOTO Workers set up video monitors at the Sharp exhibit, one of 1,800 exhibits at the Las Vegas show.

(990110 CO 5F)

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**VEGAS MARRIAGE: COMPUTERS AND TV CONVERGENCE TAKES STEP AT CONSUMER**

**ELECTRONICS SHOW AS 2 SATELLITE FIRMS ANNOUNCE INTERACTIVE PLANS**

San Jose Mercury News (SJ) - Friday, January 8, 1999

By: JON HEALEY, Mercury News Staff Writer

Edition: Morning Final Section: Business Page: 1C

Word Count: 943

**MEMO:**

CORRECTION: SETTING THE RECORD STRAIGHT (publ. 1/9/99, pg. 2A) An article on Page 1C of Friday's Business section misidentified a San Jose company making chips for interactive television. The correct name is TeleCruz Technology.

**TEXT:**

LAS VEGAS - This year, television, computers and the Internet may finally merge at a home near you.

The result -- which companies plan to make available across the country as early as this spring -- is something that still looks and functions like TV. But by harnessing the power of computers to their set, consumers will be able to tailor TV more to their own tastes and needs.

At the International Consumer Electronics Show here Thursday, the two largest U.S. providers of satellite TV each announced plans to marry some elements of computers with their television services. Both say they'll put out a new generation of converter boxes in 1999 that will give consumers the ability to interact with programs and record them digitally.

Among the benefits promised are the ability to pause live broadcasts and resume watching a delayed version, call up plot summaries and other information about programs, order products as they are advertised and summon information from the Internet onto the TV.

The country's leading TV manufacturer, Thomson Consumer Electronics, also revealed its plan for building interactive TV sets with Microsoft Corp. by the end of 1999. And San Jose start-up TeraCruz reported that three set manufacturers are adding its chips to their products, potentially turning even more sets into interactive TVs.

Consumers have heard similar promises before, including unfulfilled ones from two of the main players at this week's announcements -- Microsoft and DirecTV, the country's leading small dish satellite TV service. There is a key difference this time, however: The intense competition between cable, satellite and TV stations is boosting the companies' willingness to roll out new services. If the satellite companies plunge into these services, the cable companies are almost certain to follow.

Another important difference from the previous waves of computer-television "convergence" promises, analysts say, is in what consumers may be offered.

Microsoft's original WebTV demonstrated that consumers weren't all that interested in browsing the World Wide Web on their TV, said analyst Josh Bernoff of Forrester Research. What Microsoft and other companies are focusing on now is enhancing the TV viewing experience with additional control and information, not replacing programs with Web sites.

In particular, Microsoft's WebTV and EchoStar, operator of The Dish Network, plan to offer consumers a \$499 package that includes a satellite dish and set-top box combining three separate devices into one: a satellite receiver, a digital recorder and WebTV Plus, which allows you to connect to the Internet through your TV.

The digital recorder, like the devices developed by start-ups Replay Networks Inc. of Palo Alto and TiVo Inc. of Sunnyvale, would let viewers

pause or rewind live programs with the touch of a button on their remote control. In versions available later in 1999, the box will be able to record up to eight hours of programs chosen by the viewer or by an electronic agent that learns the viewer's preferences.

#### Information storage

The box's massive recording capacity also will be used to store games and other information, such as music or news, pulled from the Internet at ultra-high speed. With an extra \$25 fee each month to Microsoft on top of the monthly fee to EchoStar for TV programs, the box also will be able to dial into the Internet to browse the Web or send electronic mail.

One further feature is the ability to display the supplemental information that networks are starting to encode within their programs -- text, graphics and video clips that viewers can use to customize programs.

DirectTV unveiled similar enhancements. It plans to add **TiVo**'s technology to converter boxes made by Philips Electronics, due out late this year. No price has been set for the boxes or the **TiVo** service, which would be on top of the monthly fees for TV programs.

Before that, DirectTV plans to include interactive TV technology in converter boxes due out by July. That technology, made by Wink of Alameda, lets viewers call up supplemental information and order products.

#### Click here

For example, viewers tuned to The Weather Channel could click on their remote control to display a forecast for their hometown or the city they're about to visit. Or, while watching an advertisement for the NFL, they could order a football jersey with a couple more clicks.

Unlike the full-blown Internet service from WebTV, the more limited Wink functions will be provided at no extra charge, Wink officials said.

The features that consumers are most likely to embrace, Bernoff and Van Baker of Dataquest said, are the ones that hew most closely to today's TV-watching experience. Charlie Ergen, chief executive of EchoStar, agreed, saying that he likes the digital-recording functions of the WebTV-enhanced device more than the Internet-related ones.

"I think the pause feature is a great feature," he said. "That really is what, in my opinion, people really, really want."  
Sold as stand-alones

**TiVo** and Replay both expect to sell their technology as stand-alone boxes in 1999, in addition to any deals they may strike with satellite or cable companies. In the competition with EchoStar, however, they face one distinct disadvantage: both Microsoft and EchoStar will be subsidizing the new boxes to lower their price.

Ergen said that the price of the box will drop as much as needed to keep it below his competitor's prices. Replay, for example, is selling its boxes for \$700 to \$1,500, depending on the number of hours of storage.

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#### MANAGEMENT CHANGES

San Jose Mercury News (SJ) - Thursday, December 10, 1998

Edition: Morning Final Section: Business Page: 5C

Word Count: 384

MEMO:

Silicon Valley People

TEXT:

Get Manufacturing Inc. of Mountain View named Roger M. Mitric corporate vice president and general manager of its Mexican subsidiary, GETM Mexico. The company also named James E. Patty corporate vice president of quality.

General Magic Inc. of Sunnyvale named Robert J. Sandor vice president, network operations and customer support. Sandor joins the company from InterNex Information Systems Inc., where he served as vice president of operations.

Robert A. Bothman Inc. of San Jose named Brian L. Bothman, 38, director of project management; Gary E. Cook, 51, director of business development; and Dennis M. Reid, 49, director of construction management.

NetObjects Inc. of Redwood City named Scott Shwarts senior director of developer programs and evangelism.

Arts Council Silicon Valley, a non-profit San Jose organization, named seven new board members: Richard Braugh, Papken Der Torossian, Maria Ferrer, Wendy Griffing Novickis, Joyce Iwasaki, Chike Nwoffiah and Judith Schwartz.

Heidi Roizen joined the board of directors of Software Development of San Jose.

Spyrus, a San Jose data security company, named Paul Gordon vice president of sales.

The Association for Computing Machinery in New York named John White, manager of the Xerox Palo Alto Research Center's Computer Science Laboratory, chief executive and executive director.

Release Corp. of Menlo Park named Carolyn A. Rogers chief executive. Brentwood Venture Capital of Menlo Park named James Mongiello a partner.

RightWorks Corp. of San Jose named Cindy Reese vice president of industry enterprise initiatives. The company also named Louis Selincourt vice president of operations.

Tivo Inc. of Sunnyvale named Stacy Jolna vice president of programming and network relations. The company also named Jonathan Marx vice president of service operations.

Synopsys Inc. of Mountain View named Rick Neely vice president and operations controller.

Broadbase Information Systems Inc. of Menlo Park named Terry LeClair vice president of engineering.

Marimba Inc. of Mountain View named Jacqueline Ross vice president of marketing.

Verilink Corp. of San Jose promoted Tom Flak to vice president from director of marketing.

FreeGate Corp. of Sunnyvale named Richard De Soto vice president of marketing.

Image Network of San Jose named Chris Bruno vice president of sales.

In2Change Inc. of Mountain View named Frank Abajian vice president of sales.

Silicon Valley Bank of Santa Clara named Senior Vice President Valerie

Hart leader of its communications and online services practice.

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**SMART TV RECORDERS GET ANOTHER PLAYER**

San Jose Mercury News (SJ) - Friday, September 11, 1998

By: JON HEALEY, Mercury News Staff Writer

Edition: Morning Final Section: Business Page: 1C

Word Count: 684

**TEXT:**

A second Silicon Valley company is speeding to market with a new, intelligent breed of TV recorder, one that searches for programs that match the viewer's tastes.

Officials at Replay Networks Inc. of Palo Alto say they will begin selling a high-end version of their recorder in November. Early next year, they plan to release a less expensive version that will compete head-to-head with a similar TV service from Sunnyvale-based **TiVo** Inc., which doesn't expect its service to reach the general public until next year.

The two companies have different business models, but their technology is remarkably similar. Both hope to change the way people experience TV by making it much easier to record programs, allowing viewers to adjust the networks' schedules to fit their own.

This concept is known in the TV industry as "time shifting," and it was one of the factors behind the invention of the VCR. Although most households now have a VCR, few people actually use them to record programs -- in part because people have trouble programming them, in part because people like to watch popular shows at the same time their friends and co-workers do.

The **ReplayTV** box, like the **TiVo** Center, uses computer technology to make programming simple, even automatic. The two devices enable people to record programs by selecting them via remote control from an on-screen program guide, rather than having to set times and dates.

**Theme-based packages**

They also allow viewers to record every episode of a particular show, any show featuring a particular actor, or all shows falling into a specified category, such as westerns. Both companies plan to offer theme-based recording packages, too, such as movies recommended by well-known critics.

The devices store programs on a high-capacity computer disk that can play back as it records. This feature enables viewers to pause, rewind and play back live TV programs as if they were on tape.

The main difference between the two companies' approaches is that Replay wants to sell the public just an appliance, while **TiVo** wants to sell the box and a \$10 monthly programming service.

The initial, full-featured Replay units are expected to sell for \$2,000 to \$3,000, chief executive Anthony Wood said, with the later models selling for around \$500. The company may offer an optional, program-suggesting service for a monthly fee.

**TiVo**'s service, on the other hand, will suggest programs each day to individual viewers based on what they've indicated in the past that they liked or disliked. With the viewers' consent, **TiVo** also will enable

advertisers to tailor their pitches to specific homes. The revenues from monthly fees will help **TiVo** keep the price of their equipment around \$300, which is in the range of a VCR.

Both companies are negotiating with consumer-electronics companies to make and sell their boxes to the masses. Replay also has worked closely with home-theater dealers to develop its product, while **TiVo** has concentrated more on programming and service partnerships with broadcast networks, satellite operators, cable companies and advertisers.

'We think we're more customer-focused,' Replay's Wood said. **TiVo** Vice President of Marketing Edward MacBeth counters, 'We believe the service that we offer is the key to what makes this work.'

Two analysts familiar with both companies said that they did not care for **TiVo**'s monthly fees, but they had some concerns about Replay's strategy, too.

#### Pricing concerns

'Like the concept; can't tolerate the price -- even for rich home-theater buffs,' analyst Gary Arlen said of Replay. He added that Replay will be 'very vulnerable to others who could put cheap storage on set-top with a brand name,' such as Microsoft's WebTV.

Seamus McAteer, an analyst with Jupiter Communications, said Replay's recorder may appeal only to a 'very select segment' of the market unless the company expands the capabilities of its box.

'It could probably have a sizable market at a price of around \$500, \$600 if it integrated a DVD player and it didn't wed me to another bloody bill, thank you very much,' he said.

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#### **THE VALLEY'S MENTOR 'VIRTUAL CEO' IS AN ADVISER TO START-UPS**

San Jose Mercury News (SJ) - Tuesday, August 25, 1998

By: MIRANDA EWELL, Mercury News Staff Writer

Edition: Morning Final Section: Front Page: 1A

Word Count: 1,865

#### TEXT:

In the spring of 1997, a Cupertino software start-up named Magnifi was running out of cash. The firm's founders were spending most of their time looking for funding.

Randy Komisar, a Silicon Valley veteran advising the firm, put a stop to that.

He directed them instead to focus solely on getting out their product before a crucial investors' meeting 45 days away. They did -- and picked up \$3 million from investors at the scheduled meeting. At the time, the company had a bare \$5,000 left in its bank account.

For Komisar, such forceful intervention is rare but sometimes necessary. He acts as 'virtual CEO' -- a title that appears on his business cards -- for Magnifi and a handful of other Silicon Valley start-ups.

The unorthodox role he is pioneering, which earned him a write-up as a Harvard Business School case study this spring, fills a critical need in the valley's fast-moving entrepreneurial culture, say those familiar with his work. Described variously as mentor, guide, chief strategist and even

spiritual adviser, Komisar helps nascent companies negotiate the perilous stages of incubation from which few emerge successfully.

'A start-up is a pretty special coming together of people,' says Komisar, 44, a veteran of such companies as Apple Computer Inc. and Lucas Arts Entertainment Co. 'Part of it is helping them to be decisive and giving them the confidence to do that. Another slice of it is holding them together. It's pretty explosive how these pieces come together, like waves off the rock every day, off each other, off the market.'

Not quite co-captain of the team, yet more than a coach on the sidelines, Komisar has fashioned a role for himself that some say could only exist in the fluid, break-the-rules environment of Silicon Valley. With his shaved head and motorcycle gear, this Zen practitioner looks as iconoclastic as his title. Where more traditional investors might raise their eyebrows at his image or question a structure with ambiguous lines of authority, valley venture capitalists, business leaders and entrepreneurs who have worked with Komisar see only the value of adding an experienced insider who grasps the often intangible challenges of founding a technology start-up.

#### Better than money

'It's a great part of what a start-up has to have,' says Michael Ramsay, chief executive of **TiVo** Inc., a Sunnyvale start-up. Ramsay, formerly senior vice president at Silicon Graphics Inc., had no need for a mentor, but he brought Komisar to **TiVo** as an adviser. 'What Randy does is every bit as relevant as what the VCs do, in fact maybe more so, especially these days when money is not all that hard to get.'

The Harvard study on Komisar is part of the required curriculum for first-year students on general management, headed in the last three years by former South Bay congressman Ed Zschau, now a Harvard professor of management. 'It provides a different kind of paradigm for management,' says Zschau.

The Komisar case study is one of roughly two dozen focused on Silicon Valley that the business school has developed in the last year as it makes entrepreneurship a core part of its curriculum, Zschau says.

Komisar first took on the role of virtual chief executive at WebTV, which offers Internet access through television sets. He gave the fledgling company credibility at a crucial stage, says Steve Perlman, president of WebTV Networks Inc. Perlman founded the company in 1995 and sold it 20 months later for \$425 million to Microsoft Corp.

'The biggest issue you run into as a start-up is not creating the product but getting people to believe in you,' Perlman says. 'If he hadn't helped out I don't know if I could have done it. There were times when he was here every day and we were really digging through things.'

Perlman came up with the moniker 'virtual CEO,' after unsuccessfully pursuing Komisar for chief executive but still wanting to bring him into WebTV in a major role. Komisar ended up advising Perlman on investors, helping pick a management team, consulting on strategy and providing a steadying influence as the start-up rocketed from an unknown to an industry leader in a short time.

#### A burning issue

Recruiting top-notch executives in technology has always been difficult, but finding management experienced in start-ups has become a burning issue for Silicon Valley.

'I think Randy is filling a real need,' says Donna Dubinsky, the former head of Palm Computing Inc. 'In the past, everyone was looking for technical talent. Now there's a shift. There are a million products and ideas out there but no one to make a business out of them.'

Dubinsky, who is working on a new start-up herself, says she is swamped with calls from recruiters and investors looking for executives with her start-up background.

Venture capitalists often act as mentors to start-ups, but companies seeking a "virtual CEO" are looking for more active help. Komisar says: "They're looking for someone devoted to the team and not just to the investors."

Jeff Brody, general partner at Brentwood Venture Capital who has worked with Komisar at a number of companies, agrees.

"The more traditional model is the gray-haired guy who meets on a regular basis," Brody says. But Komisar's role is more global, he says. Komisar also is unusual because executives with his background and skills typically run their own companies, Brody says.

Komisar has done that, too, but enjoys the way the virtual CEO position allows him to get Zen distance from what he calls the "toxic qualities" of the valley -- its greed and obsessiveness -- while staying engaged in the start-up scene he loves.

Early in his own career, Komisar was known for his ferocious competitiveness and excelled at putting together winning business deals. A lawyer by training, he worked as an attorney at Apple during the 1980s, but left with Bill Campbell to co-found Claris, Apple's software arm.

"The human side just blossomed in that time," says Campbell, now chief executive of Intuit. "In the old days he was the hard-ass attorney. But as he broadened his responsibilities he became the soul of the company."

He "fought like crazy" with Campbell, Komisar says, but what he learned from his mentor was ultimately transforming.

"There was this wonderful sense of the game, of winning the game, but it was a game," Komisar says. "It became a lot more real for me after working with Bill. (I understood that) business is about people."

Komisar moved on to other ventures, including a stint as chief executive of LucasArts Entertainment. But soon after that, as head of video-game maker Crystal Dynamics, Komisar stumbled, in what he regards as his first significant failure.

The company foundered as the games business grew sour. Komisar was unable either to bring together warring factions within the company or to persuade the board to jettison its publishing side, he says.

#### Learning his limitations

"I learned my own limitations," says Komisar, who had come off his LucasArts tenure with high expectations. He faults himself for failing to be more decisive. One year later, he resigned: "It was very tough because I'm not a quitter and it felt like quitting."

Shortly afterward, Komisar took up Zen meditation and began focusing on his gigs as virtual CEO. He says his failure at Crystal Dynamics has not made him shy away from committing fully to just one company. He may yet take on a chief executive post, if the right opportunity comes along, he says.

Besides Magnifi, Komisar acts as virtual CEO for Digital IQ, a Saratoga start-up, and Mondo Media, a San Francisco firm. He has advisory roles at a number of other start-ups, including **Tivo** and NextCard.

Komisar thinks of himself as someone who is involved in decision-making in a broad management role rather than as an outside consultant who is paid

by the hour. He takes no fee, but gets an equity stake in the company. Since his contract generally runs for one year, that is typically a quarter of what CEO equity would be vested over four years.

During that short, initial phase of a start-up's life, Komisar concentrates on developing its executives, its funding and its strategy.

"The kind of companies we've created here couldn't have been created without his kind of role," says Perlman, who believes that helping techies make the transition to business leaders will be imperative for the new Internet-based economy.

But Komisar himself is not wedded to a formula that turns techies into CEOs.

At Magnifi, after observing the company and its executives informally for several months, Komisar made it a condition of joining that the then-techie chief executive, co-founder Eric Hoffert, switch out with Ranjan Sinha, a co-founder with a marketing background. Hoffert became chairman and chief technology officer.

The move potentially could have led to "chaos, disruption, maybe even the collapse of the company," Sinha says. Instead, "we realized how much more effective we were in our new roles and that fostered even more trust in each other and in Randy," he says.

At Mondo Media, a 10-year-old San Francisco firm that provides game animation, company founders felt stymied.

"We were pretty tired and not seeing clearly," says Chief Executive John Evershed. "We knew we had this enormous potential. He came in and helped us think it through."

#### Helping it refocus

In less than a year, Komisar helped refocus the business on animation for the Internet and television and brought in a new president to head operations. Two months ago, Mondo Media received \$2 million in funding -- its first ever -- on the strength of its new business plan.

Similarly, at Digital IQ, within six months, Komisar helped the tiny company of 17 win \$2.5 million from investors and persuaded founders to find a new chief executive.

Equally important have been more intangible changes in attitude, says co-founder Tony Hoeber. A countercultural baby boomer with a long distrust of business and its competitive style, Hoeber says his willingness to win has sharpened under Komisar's tutelage.

"I've always been a guy on the fringes and I see Randy (as) someone who is making it on his own terms," says Hoeber.

It remains an open question whether Komisar is the precursor of a new Silicon Valley management model or whether, for the time being, he simply has carved out a niche that suits his talents.

Sinha of Magnifi believes one of Komisar's unique strengths, perhaps drawn in part from his Zen practice, is his ability to stand above the fray.

"Really, that is the challenge of the job," Sinha says. "Randy has that skill -- to be detached at the end of the day."

For Komisar, perfecting the role of virtual CEO has been an opportunity to pare leadership to its essence.

"Strip away as much as possible," he says. "Tie your hands behind your back, put a blindfold on and sit you in a corner. What's left of



leadership?''

CAPTION:

Photo

PHOTO Randy Komisar

Silicon Valley veteran helps get firms focused  
(980825 FR 1A 1)

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# **START-UP AIMS FOR TV ON DEMAND**

San Jose Mercury News (SJ) - Friday, August 21, 1998

By: JON HEALEY, Mercury News Staff Writer

Edition: Morning Final Section: Business Page: 1C

Word Count: 1,093

## **TEXT:**

Start with the premise that watching TV is a good thing.

Add the supposition that there are many entertaining, worthwhile programs on TV, even though they never seem to be on when you're watching.

Finally, throw in the reality that most consumers would rather stare at a flashing ''12:00'' than learn how to program their VCRs.

These are the core tenets of **TiVo** Inc., a Sunnyvale start-up that hopes to transform the TV viewing experience. **TiVo** has developed what amounts to an intuitive VCR that scans the channels for programs its owner might like, then records them in an easy-to-use format.

The purpose is what the TV industry calls ''time-shifting,'' or enabling viewers to move their favorite programs to more convenient time slots. It's a step toward a long-awaited evolution of TV entertainment, video on demand -- a service that would let viewers watch whatever program they wished whenever they wished.

Several other companies have tried in vain to sell services or products that offered more control over the television lineup, analysts observe. For **TiVo** to succeed, they added, it may have to enlist some powerful partners among the TV manufacturers, broadcasters, cable companies and advertisers.

That's a tall order, particularly without proof that the public will want **TiVo**'s service. The last major effort at time shifting was a pay-per-view network called Your Choice TV, which folded earlier this month despite the backing of cable giant Tele-Communications Inc.

In fact, while close to 90 percent of Americans have a VCR, analyst Larry Gerbrandt at Paul Kagan Associates said that fewer than 10 percent regularly record programs. Even though VCRs aren't as hard to program as they used to be, people still like to watch shows when everyone else is watching them, said Bruce Leichtman, director of media and entertainment strategies for the Yankee Group.

''They are used to being dictated to,'' Leichtman said.

On the other hand, viewers need more help than ever before sifting through the TV lineup, given the proliferation of networks. Just as companies such as Yahoo and Excite attract users by bringing order to the chaos of the Internet, so can **TiVo** succeed by helping people navigate the TV dial, said board member Geoff Yang, a partner at Institutional Venture Partners, a venture capital firm.

Officials at **TiVo** -- veterans of the computer, microprocessor, Internet and cable TV industries -- say they plan to try out the service with several hundred Bay Area consumers this fall. The company expects to launch the product formally in 1999, with tentative prices of \$10 a month for the service and something over \$300 for the equipment.

The monthly fee is for providing daily suggestions about shows, special packages oriented around themes, and other services aimed at narrowing the 8,000 hours of TV down to the few hours per day that match the user's tastes. The monthly bill could be a tough sell, analyst Gary Arlen said, adding, "That's their biggest challenge."

At first, the equipment will take the form of a VCR-sized box that users plug in between their TV and their antenna, cable box or satellite dish. The company's hope, however, is that the equipment will someday be built into television sets.

The company's ambition to change the way people watch TV is founded on two key technologies.

One is the ability to record TV signals on the kind of high-capacity disk found in computer hard drives, and to play back programs even while they are being recorded. In addition to giving viewers instant access to anything they record -- no need to search through hours of tape -- it lets people pause and rewind live programming. No more waits for instant replays, no more crucial scenes missed while answering the doorbell.

The other is the ability to record programs based on a viewer's identity or preferences. In essence, the **TiVo** equipment reads the TV lineup electronically and looks for shows matching the ones viewers say they like -- and rejecting ones they don't like, or have already seen.

Naturally, the more users reveal about their likes and dislikes, the better **TiVo** performs. The **TiVo** remote control enables viewers to tell the equipment what they love, what they like and what they hate.

The result, said CEO Michael Ramsay, is that viewers can come home, turn on the TV and call up the programs they want to watch, not necessarily the ones dished out by the networks. For example, "Must See TV" on Thursday nights could be transformed into three hours of Gilligan's Island reruns -- shows that TBS broadcasts at 5 a.m.

The **TiVo** technology also can grab advertisements and insert them into shows. That way, a young family watching "Murder, She Wrote" could see a Pampers spot that the **TiVo** equipment inserted in place of a Depends ad, based on what the family had told **TiVo** in the past.

Advertisers long have targeted their pitches to specific audiences, but the best they can do today is align themselves with TV programs geared toward certain age groups and tastes. **TiVo** could not only let advertisers target individual consumers, but also tell advertisers what those consumers liked and disliked, said Robert Poniatowski, **TiVo**'s director of product marketing.

Ramsay said it would be up to viewers to decide how much to divulge to advertisers, although viewers could be given incentives to reveal information about themselves. Added Ed MacBeth, **TiVo**'s vice president of marketing and business development, "We take the privacy issue very, very seriously, as do the advertising partners we're working with."

The company also is talking to broadcasters about ways to develop special packages for **TiVo** users. One of the networks that has expressed an interest in the company is HBO, a premium cable service that survives on subscription fees, not advertising dollars.

Kevin Dowdell, vice president of interactive ventures for HBO, said the company would love to make all of its shows available on demand on its subscribers, and **TiVo** is a step in that direction. "I think of it as a

pretty big step beyond a VCR," Dowdell said.

"And it's not easy," he added. "We live in a world of standardized electronics and big players that have a lot of control. They have to convince many of the key players in the industry to use it . . . and come up with a business model that works all the way around."

CAPTION:  
Photo

PHOTO The **TiVo** equipment reads a TV lineup electronically and looks for shows matching the ones viewers say they like.  
(980821 BU 1C 1)

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**INTEL TOUTS 'SOCIAL COMPUTING' BUT SOME DOUBT THAT PARENTS AND CHILDREN  
WILL JOIN IN USING A MACHINE DESIGNED FOR SOLO USE, EVEN IF IT'S  
INTEGRATED WITH A TELEVISION**

San Jose Mercury News (SJ) - Friday, October 4, 1996  
By: JODI MARDESICH, Mercury News Staff Writer  
Edition: Morning Final Section: Front Page: 1A  
Word Count: 1,384

MEMO:  
THE FAMILY ROOM PC

TEXT:  
Could the personal computer become the gathering spot for family activities?

Intel Corp. is working on a new project to lead families in the late 1990s to gather around a large color monitor attached to a PC - just like the family of the 1930s huddled around the radio, or its counterpart in the 1950s gathered around the TV set.  
Intel has dubbed the concept "social computing."

Not content for PCs to be relegated to the home office, Intel and Toshiba America Information Systems Inc. quietly have begun evangelizing the "Family Room PC" to PC manufacturers, with an eye toward wide availability of the new systems in fall 1997.

The Family Room PC, which will come in many shapes and sizes from various vendors, is not a new idea. PC-TVs have begun appearing on the market, but this represents a new effort by Intel, whose position as the world's largest maker of microprocessors tends to heavily influence the design decisions of PC makers, to join the PC-TV bandwagon.

Under the plan, the PC-TV will use a large-screen color monitor and a TV tuner that transforms the PC into a **smart TV**. Home users will be able to plug in their surround-sound speakers and play movies off their digital video discs, for example. Some Family Room PCs will offer a message center for telephone and electronic mail, while others will offer video conferencing.

Family Room PCs will have wireless devices, like keyboards and joysticks that will let groups of people watch television, play games, surf the Internet or control home electronics devices.

Skeptics see joystick fights

The idea of the PC as the family's central socializing area has attracted skeptics already.

"One of my points of skepticism about the PC-TV is it's a group device," said Steven Tirone, research analyst with International Data Corp. "Can you imagine mom and pop and junior fighting for control of the joystick?"

Today's PC, for home and business use, was crafted for a single user who sits about two feet from the monitor and mostly uses the tool for personal productivity. The new Family Room PCs are big enough that families can sit 10 to 12 feet away.

The Family Room PC doesn't introduce new technology. Rather, it integrates a number of emerging technologies onto the PC's main circuit board, or motherboard. Intel representatives have briefed several PC manufacturers on what technologies will be built into the Family Room PC. They include:

(box) Circuitry to support the new digital video discs, or DVDs, that are set to replace CD-ROMs in most computers.

(box) The latest graphics technology, known as MPEG-II, to allow vivid video playback.

(box) Surround-sound capabilities so that people watching movies or television can get a home theater effect.

(box) A dual function use that will allow people to surf the Web, and while waiting for Web pages to come up, to watch TV. The Family Room PC also will be a platform for single-user or multiplayer games.

"(The PC) should have better graphics and better Web browsing than a single-function appliance," said Mike Aymar, vice president and general manager of Intel's desktop products group. "It's a more complete, more flexible device."

Aiming for 'early adopters'

PC-TVs will start off as relatively expensive products that appeal to "early adopters" who want to be the first to have the newest electronic gadgets. But as prices decrease, as most computers and consumer electronics product do, more and more people may tune in to PC-TV.

"You'll find a range of products for the Family Room that initially might be a little more expensive than today's mix of PCs, but quickly they will reach all the same price points that home/office PCs hit today," Aymar said.

There are drawbacks to the PC-TV besides its price, however. It's built around the Windows 95 operating system by Microsoft Corp., for one thing. Television watchers who are used to instantly switching on their TV might tire of waiting for Windows to come on, or "boot up." And if the operating system crashes during a cliffhanger episode of the "X-Files," viewers might not be too pleased.

PC makers briefed by Intel said the devices could range in price from \$3,500 to \$5,000.

But already, prices for the first PC-TVs to hit the market are coming down.

Gateway2000, a Sioux City, S.D., PC manufacturer that mostly sells its products through mail order, is a pioneer in this nascent market. Its first so-called "Destination" PC-TV began selling in May. This week the company broke the \$3,000 price barrier by cutting almost \$700.

Analysts said sales for the early PC-TVs, including the Destination, are

disappointing.

'One of the reasons Gateway resorted to placing (Destination) in selected outlets is it's not moving very well,' said Walter Miao, senior vice president of Access Media International, in New York City. 'It seems difficult to sell a \$4,000 system sight unseen.'

Stacy Hand, product marketing manager for the Gateway Destination, said sales have 'met expectations,' but she acknowledged that consumers are resistant to change. 'When you're developing a new product category, you can't base its acceptance on the first six months of sales.'

'Very promising concept'

Intel's Aymar is one of the first users of the Destination. Aymar recently helped his daughter write a report on the governor of Tennessee. By surfing the Web, they clipped a photo of his family and included that in the report.

'To do that (with a home office PC), it was difficult,' Aymar said. 'We had to keep rolling back and forth on chairs in front of our two-foot PCs. The Gateway Destination is a very promising concept. You get rid of the wires, it goes to a large screen. It's a more social experience. Think of the potential for applications.'

Aymar envisions families flipping through a digital photo album, or keeping track of all their CDs - and playing them - through an application hooked up to a CD jukebox.

Gateway's Hand added: 'There's no question the PC will be the centerpiece of the home entertainment system. Everything else, the appliances like VCRs, the gaming machines, are going to be in the beginning attached to it. But as the product evolves, those things will go away.'

Such logic is why a host of technology companies are offering new products aimed at home entertainment using either the PC, TV - or both. NetTV Inc., a small San Rafael company, makes a PC-TV that competes with Gateway's Destination, and other manufacturers including Compaq and Toshiba are expected to follow suit.  
Lower-cost competition

Intel is promoting the Family Room PC while its turf gets encroached upon by consumer electronics vendors who are offering lower-cost, simpler-to-use 'information appliances.' These aren't as powerful as an Intel-based PC but might appeal to consumers with less disposable income.

For instance, WebTV Networks Inc. has created a \$300 device that hooks up to a TV monitor and lets users surf the web through a remote control device. The resolution of TV monitors is not as precise as a computer monitor, but WebTV's offering is a viable alternative.

'Intel sees this shift in the industry, bringing the power of a computer to average people, but not in the form of a PC, and they're trying to get out there and pre-empt that, and say, 'No, no, no, the PC is the perfect fit,' ' said Joe Gillach, vice president of marketing at Diba Inc., a Menlo Park developer of software for information appliances. 'They're trying to protect their franchise.'

Information appliances are typically devices designed for one or two specific uses, such as making phone calls and retrieving electronic mail, or surfing the Internet from a TV.

'We believe that what's happening is there is this big battle brewing in the industry, a sort of clash of the titans,' Gillach said. 'It's the PC manufacturers . . . versus the consumer electronics companies.'

Microsoft has teamed up with PC manufacturers to make PCs more like appliances. One initiative, called 'On Now,' aims to make PCs instantly

available when they're turned on rather than waiting a minute or longer for Windows to boot up.

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DESCRIPTORS: COMPUTER TECHNOLOGY FAMILY FUTURE CULTURE

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**SIT DOWN! SMART TV ANTENNAS WILL ADJUST THEMSELVES**

San Jose Mercury News (SJ) - Tuesday, April 18, 1995

By: JEANNINE AVERSA, Associated Press

Edition: Morning Final Section: Business Page: 1F

Word Count: 395

MEMO:

Tuesday Focus: New Ideas

TEXT:

For the millions of Americans who still rely on set-top antennas to watch television, it's an all too familiar experience: You adjust the antenna to get a clear picture, and by the time you plop back down on the couch the screen is fuzzy again.

Help is on the way.

Under a contract with the National Association of Broadcasters, Megawave Corp., a Boylston, Mass., company that has done work for the military, is developing a "smart antenna."

The antenna, the first of its kind, has two important features, a built-in microprocessor and the ability to pick up a wide range of frequencies from the VHF band to the UHF, said John Abel, the association's executive vice president.

"It's been almost 20 years since the last major change in antenna technology," Abel said.

Megawave plans to have a prototype to show the association by June. The antenna should be in stores by January, said James Tomlin, staff engineer for Megawave, which has been working on the antenna since last year.

Tomlin says the antenna could sell for \$15 to \$100.

The association, whose members include broadcast networks and their affiliates, would not say how much it is investing in the project.

Among the benefits of the new antenna to viewers:

(box) They won't have to get up and adjust the antenna if they click to another channel.

(box) It is less susceptible to interference from surrounding objects, such as a person's body.

(box) It is expected to improve reception.

"If I switch from channel 33 to 7, the antenna automatically adjusts, but you won't see it physically move," Abel said. That's what they mean by a smart antenna, and that's made possible by the microprocessor inside.

One of the big annoyances to a person adjusting an antenna is that when he or she moves away from the set, the picture goes haywire again. That

happens because "the body affects the electromagnetic field" around the antenna, said Richard Green, president of Cablelabs, a private research and development facility backed by major cable companies.

Green said he is skeptical that the new antenna could address this problem. He was also skeptical that an antenna containing a computer chip and the technology to sweep from the lower VHF to the higher UHF frequencies -- a large slice of the airwaves -- could be made cheaply.

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**SHORTAGE BOOSTS PRICES OF CHIPS POWERING MULTIMEDIA PROGRAMS**  
San Jose Mercury News (SJ) - Friday, March 3, 1995  
By: Mercury News Staff and Wire Report  
Edition: Morning Final Section: Business Page: 3C  
Word Count: 321

TEXT:  
A severe shortage of the computer memory chips that power multimedia and interactive applications is causing prices to skyrocket.

The rising prices won't affect personal computer prices in the immediate future because most major PC makers have long-term contracts. Even if the contract prices were to rise, PC makers may be reluctant to raise retail prices because of an intense price war and competition to garner market share.

The shortage has pushed the price of standard 4-megabyte dynamic random-access memory, or DRAM, chips as much as 60 percent on the spot market, analysts said.

"Most companies are sold out," said analyst Gerry Moore of Cowen & Co. "You name the company, they are all adding capacity."

Most new computers now come with 4 megabytes of memory, but popular games, entertainment programs and the scheduled release of Microsoft Corp.'s Windows 95 in August will require the average machine to have from 8 megabytes to 12 megabytes of memory.

The shortage is being caused by growing demand and a reduced supply line caused in part by the earthquake in Kobe, Japan, that caused some memory chip plants to shut down. Also, chip makers currently reap higher profit margins from less-powerful 4-megabyte chips because those are the standards in demand by computer manufacturers. Memory chips store programs and data temporarily while the personal computer is turned on.

Steven Appleton, chairman of Micron Technology Inc. in Boise, Idaho, for example, said his company won't stop making 4-megabyte memory chips in favor of the larger capacity 16-megabyte chips.

"If someone wants us to make something else, they better have a good reason," Appleton said. Computer companies, which buy the bulk of chips used in computers, still aren't requiring the higher memory chips.

The push for more capacity comes amid soaring demand for multimedia computers, video- on - demand TV set-top boxes and video games that gobble up computer memory.

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DESCRIPTORS: SEMICONDUCTOR; PRODUCT; MULTIPLE; MEDIA; PROGRAM; COST;  
INCREASE

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**PAC BELL UNVEILS PLAN FOR 2000 'SUPERHIGHWAY' TO CARRY TV AND MORE**

San Jose Mercury News (SJ) - Friday, November 12, 1993

By: MIKE LANGBERG, Mercury News Staff Writer

Edition: Morning Final Section: Front Page: 1A

Word Count: 925

**MEMO:**

See also related story on page 21A of this section.

**TEXT:**

Cancel any future plans to surf through 500 channels of cable television.

Pacific Bell has something even more compelling to offer: one channel.

That's the ultimate goal behind the company's ambitious announcement Thursday of plans to spend \$16 billion by the year 2000 on a "communications superhighway" serving the Bay Area and much of Southern California.

Pac Bell's network ultimately could offer all kinds of entertainment, information and education whenever the customer wants -- creating a single channel, in effect, instead of requiring viewers to wade through multiple channels in search of a particular program.

Copper wires that now carry telephone calls from homes and offices to regional switching centers would be replaced with a combination of fiber-optic lines and coaxial cable.

The huge increase in capacity would allow Pacific Bell to deliver television programming and computer data as well as phone calls, putting the San Francisco-based utility in direct competition with cable television operators.

Construction will start in the spring of next year in four urban areas: northern Santa Clara County (covering the cities of Campbell, Los Altos, Los Altos Hills, Milpitas, Mountain View, San Jose, Santa Clara, Saratoga and Sunnyvale), and portions of Los Angeles, San Diego and Orange County.

The goal, according to Pac Bell, is to have several hundred thousand customers hooked up by the end of 1994, 1.5 million by the end of 1996 and 5 million by the end of the decade. The company said the expansion will be self-financed through money saved by operating a more efficient state-of-the-art network.

"There will be no rate increases," Pacific Bell President Phil Quigley said Thursday at a Los Angeles news conference. "We will internally fund this great new opportunity."

**\$5 billion deal with AT&T**

Most of the equipment and software will come from AT&T, which builds telephone equipment and computers in addition to providing long-distance service, through a \$5 billion partnership with Pacific Bell.

Pac Bell isn't spending \$16 billion just to offer better service. The company is trying to fight off a direct threat to its future.

The state's largest cable television operators have been making plans to upgrade their systems to essentially take on Pac Bell -- opening the prospect of cable companies offering telephone service along with ESPN, MTV



and CNN.

Tele-Communications Inc. of Denver, the largest cable operator in both the nation and California, said in October it would merge with Bell Atlantic Corp., a regional phone company based in Philadelphia, to hasten a nationwide upgrade of TCI's cable systems.

TCI plans to spend \$2 billion during the next three years on fiber-optic lines, including a fiber loop circling San Francisco Bay that is already under construction with a scheduled completion date in 1995.

#### Regulatory freedom sought

Cable operators are now pushing for regulatory freedom to compete with Pacific Bell in providing telephone service; Pac Bell and other regional phone companies are simultaneously pushing for the right to offer television programming.

Dale R. Bennett, state manager for TCI Cablevision of California in Walnut Creek, welcomed Pacific Bell's move to match the cable industry.

"We're actually pleased that it's beginning to happen," Bennett declared. "We always think competition is better than control."

All the promises of wonderful new services from Pac Bell and TCI could be premature, however.

Much of the equipment required to build the communications superhighway is still under development and, despite the billions at stake, the developers don't yet know what services will appeal to consumers.

#### No one wants to be left out

Large phone companies, cable operators and television producers have staged a series of can-you-top-this news conferences all year, eager to appear to be on the cutting edge of technology. The frenzy has reached the point where no one wants to be left behind -- and Pac Bell has come under criticism recently for appearing to sit on the sidelines.

"I feel they've been forced to show they're doing something," said Michael Killen, a telecommunications industry analyst in Palo Alto. It could take several years to sort out what the public wants, according to Killen, and how fast companies such as Pac Bell can afford to move.

"The returns won't be immediate and huge, because they (Pacific Bell) will be in a price battle with cable operators and video stores," added Tom Adams, a cable television analyst with the research firm Advanstar Associates in Carmel Valley.

Concluded Eric C. Zimits, a telecommunications industry analyst with the investment firm Volpe Welty & Co. in San Francisco: "Everyone understands this is a huge opportunity, but it's like a mountain in the distance -- no one is sure how far away it is."

CAPTION:

Map

MAP: CLEVELAND LEE -- MERCURY NEWS

#### What Pacific Bell wants to offer

In these Silicon Valley cities, Pacific Bell hopes to offer a variety of new services. Among them:

Video on demand -- TV viewers could select from thousands of movies and television programs stored on computer disks, summoning any one of them at any time.

Telecommuting -- Workers at home could plug into computer networks as

if the were in the office.

Electronic distribution -- Video games, music and magazines could be sent through the network.

Home shopping -- Viewers could select merchandise they want on a shopping channel and place an order with the push of a button.

Education and community involvement -- Students could attend classes at a local community college through their television; voters could participate in city council meetings.

(Map of Santa Clara County) (color)

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DESCRIPTORS: TELEPHONE; COMPANY; FUTURE; MULTIPLE; TELECOMMUNICATION;  
PROGRAM

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07244043

**NEW LAW FORCES BROADCAST, CABLE INTO EACH OTHER'S ARMS**

San Jose Mercury News (SJ) - Tuesday, August 31, 1993

By: RON MILLER, Mercury News Television Editor

Edition: Morning Final Section: Living Page: 1D

Word Count: 1,383

**TEXT:**

AT FIRST, passage of the Cable Act of 1992 by Congress threatened to touch off a final conflict of Armageddon-like proportions between those old enemies, broadcast and cable television.

Now it's beginning to look as if the negotiations forced upon the old adversaries over a key issue -- payment for cable's use of local TV station signals -- will hasten a process of fundamental change in the way broadcasters and cable systems do business.

It might, in fact, affect the face of television well into the next century, when broadcasters and cable operators may need each other's help to survive.

A significant turning point in broadcast/cable relations probably came last week when CBS conceded it is now discussing a "new programming venture" for cable with the largest cable system operators in the country. CBS hasn't been a player in cable since it folded CBS Cable, its unsuccessful cultural network, more than a decade ago.

That means the last holdout among the big four networks is almost certain to launch a new cable service within the next year. It also seems likely to erase the last possibility of a nationwide "blackout" of any broadcast network programs by cable systems that otherwise might have occurred after Oct. 6.

Not long before the CBS announcement, relations between broadcast and cable interests had reached the "hour before midnight," as the Oct. 6 deadline fast approached for implementing a provision in the new cable law that says cable systems no longer may pick up the broadcast signals of local TV stations without their permission, then retransmit them to homes for a fee as part of the basic channel "menu."

The Cable Act also made it possible for local TV stations that were shut out of local cable to demand a channel allocation under the "must carry" provisions of the new law. Stations that already were on cable also could make sure they'd remain there by requesting "must carry" status.

But, even more important, stations the cable systems wanted to carry now could demand some form of payment in return for permission to send their signal into homes via cable.

Under the new law, no cable system could carry any of the "payment on demand" TV stations without agreeing to terms. Another way of looking at it was that a cable company could drop any station that wouldn't agree to terms.

A nationwide standoff developed when seven of the 10 largest cable companies -- the so-called "MSOs" or "multiple system operators" -- flatly refused to consider any negotiations that involved cash payments. Sen. Daniel Inouye, D-Hawaii, one of the architects of the cable law, promised a government probe of the unified cable stand for possible anti-trust violations.

At its worst, when most TV stations were demanding cash payment, the standoff could have led cable systems to drop some of the most popular network affiliates, and independent stations with the most-watched syndicated shows, just as the fall TV season was getting started and the World Series was only days away.

Nothing like that is going to happen now. That's because both sides feared the economic consequences of reaching the deadline without coming to terms.

Needing each other

Broadcasters feared loss of advertising revenue if too many cable systems dropped them. More than 60 percent of U.S. homes now rely on cable instead of rooftop antennas to receive TV signals. Many viewers no longer even own working antennas. Any significant drop in audience would force broadcasters to make good on viewership guarantees they had made to advertisers in advance.

But local cable concerns also worried about widespread complaints from viewers if their favorite channels were dropped overnight. They weren't anxious to provoke any subscriber revolts by playing their trump card in negotiations.

Rather than stubbornly race toward Armageddon, broadcasters and cable operators blinked. They began to look for ways to save face while complying with the law and came up with a series of bold compromises.

So far, the result of those compromises has been the promise of adventurous new partnerships between local TV stations and cable systems, broadcast networks and cable ownership groups.

Already, three of the four broadcast networks have made deals with the largest cable system owners in the United States waiving "retransmission" fees in return for guaranteed cable channels they can use to launch new cable networks. This will further blur the dividing lines between what's cable and what's broadcast.

ABC and ESPN2

ABC's deal, which covers only the seven TV stations it owns, will help launch ESPN2 this fall, a spinoff of ABC's existing all-sports network, on some of the nation's largest urban cable systems. San Francisco's KGO (Ch. 7) is owned by ABC, so its pending deals with local cable will bring ESPN2 to the Bay Area later this year.

The Fox network has made a similar deal to launch a new ad-supported basic cable entertainment network in early 1994. By promising to share revenues from that network with its affiliated stations, Fox has persuaded most of its stations to waive fees and join with the network to lock in cable channels for Fox's cable network all across the country.

Oakland's KTVU (Ch. 2) is one of them, which means a second all-new cable network will be available to most Bay Area subscribers as a result of the negotiations.

NBC is negotiating deals for the stations it owns by offering to give up fees in return for cable channels. It plans to launch a new all-talk cable network called "America's Talking." It's offering NBC affiliates the chance to join the party by providing them with space for local advertising "inserts" in the new network programming. NBC hopes that'll give them an incentive to waive local cable fees and trade the use of their local signal to cable companies in return for an empty channel NBC's new network might use.

That seems to be the route CBS is taking: Launch a new cable service that will offer some potential of financial participation to its affiliates, who still may need such a bargaining chip in their own separate local negotiations.

The ties that bind

The net result will be four all-new cable networks and deeper, more intricate relationships between the broadcast networks, their stations and the nation's local cable systems.

Even more intriguing are the cooperative ideas springing from enterprising local TV stations and the cable systems that carry them. For example, NBC's local affiliate, San Francisco's KRON (Ch. 4), last week announced a series of cable deals to trade its broadcast signal for cable channels it will use to launch its own 24-hour all-local news channel.

In the Bay Area, KRON has been the most innovative and aggressive in the pursuit of cable deals, a purposeful strategy to position itself to compete in a future where networks like NBC are expected to gradually lose audience as more and more viewing alternatives turn up.

As heated as some of the exchanges between the rivals became when the Cable Act of 1992 was being pushed into the law books, it has forced them further into cooperation than they ever might have imagined. It's almost analogous to the current world economic climate, in which once deadly adversaries such as Japan and the United States are so involved in cross-ownerships, partnerships and interdependencies that conflict no longer seems very practical.

ABC and NBC already are heavily invested in cable. Fox not only is starting its first cable network, but is using cable channels on friendly systems to fill in gaps in its national affiliate ranks. The new fifth network proposed last week by Warner Brothers also will use cable systems as network affiliates where TV stations aren't available.

Co-dependent new world

Day after day, a growing number of local TV stations do news updates on cable networks like Ted Turner's CNN Headline News or have similar cooperative arrangements with local cable for news. Co-ventures for sports rights packages already exist. It's clearly a trend that someday may remove the walls between cable systems and TV stations entirely.

When that day comes, the players may look back on their squabbles over the Cable Act of 1992 as a quaint reminder of the start of something very special to them all.

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DESCRIPTORS: TELEVISION; SERVICE; LEGISLATION; REACTION

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**THE BIG PICTURE LINKING TV, COMPUTER CREATES HOME THEATER**

San Jose Mercury News (SJ) - Sunday, December 1, 1991

By: MIKE LANGBERG, Mercury News Staff Writer

Edition: Morning Final Section: Computing Page: 1F

Word Count: 1,122

**MEMO:**

See also related story on P. 1F of this section

**TEXT:**

Frox Inc. of Sunnyvale is a small start-up company attempting to single-handedly transform home entertainment technology, something that large American electronics companies have not yet had the nerve to try.

"The first vision of the inevitable," Frox proclaimed earlier this year in magazine ads for a product that won't even start shipping until later this month.

Inevitable" refers to the electronics industry's big goal for the '90s: merging TV and computer.

"First vision" is the Frox System, a home-entertainment package that puts awesome powers in the hands of consumers who can afford \$10,000 for a starter set and up to \$50,000 for the deluxe model.

At the heart of the Frox System is a 32-bit Sparc microprocessor, the same chip that powers work stations made by Sun Microsystems. But the casual couch potato won't need to learn anything about computers to play with Frox; the system is a Trojan horse that almost invisibly introduces a computer into the living room.

With the Frox System, everything is controlled through the TV screen with a one-button remote control called the Frox Wand. The wand sends a disembodied, white-gloved hand across on-screen displays that resemble the control panels of a TV, videocassette recorder or stereo.

"The key to the Information Age is going to be ease of use," said Austin Vanchieri, Frox's president and chief executive officer.

"Fortunes will be made on that in the next 10 years," added Steve Reynolds of Link Resources, a market research firm in New York. "People are calling out for better ways to control and digest the information streams they have in their lives."

The Frox System will control and digest information without a second thought by the consumer.

A service called Frox Cast pipes TV schedules into the system's 52-megabyte hard drive, using a previously empty portion of the signal from superstation WTBS in Atlanta. Viewers can display TV schedule grids on screen, call up details on any single program and order their VCR to tape a selection at the push of a button.

Early next year, Frox Cast will be expanded to include sports scores and stock quotes, entering a market eyed by telephone companies and newspaper publishers.

By converting incoming analog video and audio signals into digital code, the Frox system also enhances the quality of TV and music. Frox claims its enhanced video image virtually matches high-definition television, or HDTV, a proposed new standard that is at least five years from reaching homes in the United States. Music can be altered to imitate the acoustics of anything from an intimate jazz club to a huge arena.

What's more, the Frox System is easily updated to accommodate new types of home entertainment equipment or new information services. The computer

can be reprogrammed automatically through information sent over WTBS or by inserting a special tape into the system's VCR.

Non-technical Frox users probably won't realize they're harnessing a computer to enjoy all these new features. Nor is Frox eager to rub it in -- the Sparc processor is contained inside an unadorned black box.

"This is a unique American interpretation of how electronics should be made easier," said Bud Myers, vice president for sales at Frox.

With its five-digit price, Frox is aimed at the emerging market for home theater systems. Home theaters, which typically combine a large-screen television and a high-end stereo, start at \$5,000 and range up to \$100,000 depending on the degree of sophistication.

Frox is starting with home theater because the market is growing rapidly -- unlike demand for moderately priced televisions and stereos -- and because buyers can support the hefty cost of new technology. But the company is already at work on "Project Mercury," a scaled-down Frox system intended to reach stores by Christmas 1993 at a cost of about \$1,000.

The company is also willing to license its technology -- a combination of custom-designed semiconductors along with an operating system containing more than 250,000 lines of computer code.

"We're looking for a partner now to (help us) approach the mass market," says Austin Vanchieri, Frox's president and chief executive officer.

Approaching the mass market won't be easy. Frox's elegant, easy-to-use software and powerful hardware has won laudatory coverage recently in Business Week, Forbes and The Wall Street Journal.

But it's unclear how soon major manufacturers of consumer electronics, most of them in Japan, are going to start connecting computers to televisions and whether they will develop their own operating systems rather than turn to Frox.

"Frox's competition is less other independent companies than development groups inside the big electronic companies," says Richard A. Shaffer, editor of the Technologic Partners Computer Letter in New York.

Several Japanese consumer electronics companies are already offering high-end audio and video equipment that matches Frox performance, although without Frox software to tie it all together.

Competitors in the United States, meanwhile, are working on similar approaches to "smart TV." Insight Telecast Inc. of Palo Alto, for example, is planning a system to provide on-screen TV schedules and VCR programming at a mass-market price. Michael Faber, Insight's president, said the system will be available in some cities before the end of next year.

In its favor, Frox has a solid Silicon Valley pedigree. The company was formed in 1988 by industrial designer Hartmut Esslinger of Frogdesign Inc. in Menlo Park and programmer Andy Hertzfeld, two key creators of the original Apple Macintosh.

Brought together informally by Apple co-founder Steve Jobs, Esslinger and Hertzfeld then recruited Andreas Bechtolsheim, the technical genius behind Sun Microsystems.

The original team dropped out of active participation early last year, however, in part because of the Frox System's spiraling cost.

"One of the reasons I left the project is because it was clear to me it wasn't going to be inexpensive enough to reach the market I want it to reach," said Hertzfeld, who is still a Frox stockholder. He also said Frox engineers left out some of the best elements in his software design.

Before Esslinger stepped back, he raised \$22 million from investors in Europe to support Frox. Vanchieri said last week the company expects to sell more than 3,500 systems in 1992, enough to generate almost \$40 million in revenues and put Frox at the break-even point sometime in the second half of the year.

To get there, Frox will need another \$5 million. Vanchieri said he expects to raise that amount or more from private investors later this month.

CAPTION:  
Photo

PHOTO: Gary Parker -- Mercury News

Austin Vanchieri, chief executive, says ease of use is key to Frox System (color)

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DESCRIPTORS: COMPUTER; TECHNOLOGY; TELEVISION; MERGER; THEATER;  
ENTERTAINMENT

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06309100

**THE FUTURE HINGES ON HOW WE DECIDE TO GET THERE**  
San Jose Mercury News (SJ) - Monday, November 4, 1991  
By: MIKE LANGBERG, Mercury News Staff Writer  
Edition: Morning Final Section: Business Monday Page: 1D  
Word Count: 1,260

MEMO:  
See also related articles on this page.

TEXT:  
When it's time to debate eye-glazingly esoteric technical and regulatory issues surrounding the future of telecommunications, Pacific Bell knows exactly what to do.

Grab the heartstrings and yank hard.

Pacific Telesis, Pac Bell's San Francisco-based parent company, recently produced an eight-minute video called "First Born" to accompany a lobbying effort aimed at politicians and regulators.

Set in the year 2003, "First Born" is the story of a middle-aged Hispanic couple in Fresno whose daughter in San Diego is about to give birth prematurely to their first grandchild. As the wife frantically packs her bag, the husband sits at his small two-way videophone making plane reservations and choosing a crib from a catalog display. Meanwhile, a doctor studies a sonogram of the daughter's baby from home by videophone and gives his diagnosis to the nurse.

At the tear-jerking conclusion, the wife -- now in San Diego -- introduces the family's new grandson to her husband in Fresno through a window-sized two-way video screen.

Pac Bell is willing to offer us this wonderful future -- but there is a catch. The phone company wants to be freed from a long list of regulatory restraints so it can build the expensive infrastructure required to support advanced telecommunications services.

Fiber optics is the key to this vision -- specifically, putting high-capacity fiber-optic cables at or near individual homes. Manufacturers

of telephone equipment, telephone companies and regulators are now in the middle of deciding how to engineer this transformation and how much it will cost.

These tough issues aren't getting much public attention, but they are crucial to the future of Silicon Valley. Dozens of companies in the hardware, software and information services industries are preparing to make multimillion-dollar gambles on the future of telecommunications in the home. Products or services that require the larger capacity of fiber could flop if that capacity is not there soon enough.

A bundle of fiber cables no thicker than an adult's finger can carry 96,000 telephone conversations simultaneously -- a feat that would require 27 conventional copper-wire telephone cables, each measuring two to three inches in diameter. The huge capacity of fiber optics could make possible new interactive services such as video conferencing and sophisticated home shopping.

The biggest hurdle remaining is what telephone companies call the "last mile" or the "local loop," the huge network of copper wires that connects individual homes and small businesses to central switching offices.

There is a consensus that copper wire will eventually disappear from the last mile, but little agreement on when or at what cost.

Fiber, which carries brief bursts of laser light, has already taken over the top of the telephone pyramid. Because fiber is most efficient at carrying heavy volumes of data or voice traffic, long-distance networks began converting to fiber optics a decade ago, and they are now almost totally converted. Fiber optics has also become cheaper than copper wire for connections between local telephone switching centers and for big companies that need to move large amounts of computer data.

But fiber is still more expensive than copper for the local loop, because the relatively low volume of traffic doesn't cover the high cost of stringing fiber cable through neighborhoods and installing equipment at individual homes or curbside units, serving several homes, that convert light into electronic signals.

More efficient designs could wipe out that cost difference within a few years. But copper wire wears out slowly. If fiber is put into the loop only when copper needs to be replaced, the conversion process could take 30 or 40 years.

That leaves telephone companies with a "chicken and egg" dilemma. The types of advanced services portrayed in "First Born" would generate extra revenue to cover the cost of installing fiber. But there isn't any demand yet because there isn't any way to provide these services today at a reasonable price.

"To be honest with you, I think if one looks at this very realistically, there is no mass market 'want' out there," said Dale Harris, a former Pacific Bell executive who now directs the Center for Telecommunications at Stanford University. "There is a wish list, but when you talk about (customers) paying more, it's a different question."

Telephone companies face several other roadblocks.

A maze of federal laws and state regulations prevents phone companies that provide local service -- Pacific Bell and GTE in Northern California -- from branching into other types of telecommunications such as cable television, "electronic Yellow Pages" home shopping, two-way video and home information services.

Numerous opponents, led by newspaper publishers and cable television operators, oppose relaxing those barriers because they fear the possibility of a monopoly supported by the phone companies' vastly greater financial resources. In California, the state Public Utilities Commission is



concerned enough about the risks to ban Pac Bell and GTE -- at least for now -- from putting fiber in the local loop.

"If they make a huge investment and it doesn't pay off, it could affect rate-payers because rates would have to go up to cover the cost," said David Gamson, a senior analyst at the PUC's San Francisco office.

The Federal Communications Commission took the first step toward allowing telephone companies into the video business with a surprise ruling on Oct. 24 that could ultimately allow Pacific Bell and other local phone companies to provide "video dial tone" service.

Video dial tone would be similar to telephone dial tone -- the customer would decide whom to call. A **smart TV**, connected to video dial tone, would scan available programming from many different sources and offer a selection to the viewer.

Rapid changes in telecommunications technology are also confusing the picture. New ways to compress electronic signals and increase the capacity of copper wire are raising the possibility that many advanced services could be offered without replacing copper in the local loop.

Cable companies, too, are considering whether to put fiber in their loop -- a network almost as comprehensive as the local telephone system. About 90 percent of households in the United States are already passed by a cable network and about 60 percent of those households subscribe.

This network is built on coaxial cable, which has a much higher capacity than copper wire. Cable television today is dedicated to a single purpose: providing television signals. But cable operators are studying enhancements, including increased use of fiber optics, to support new services that could put them in direct competition with telephone companies.

John J. Sie, head of the Encore movie channel in Denver, said cable systems will build fiber "nodes" within five years that will serve from 100 to 1,000 homes with up to 400 television channels and offer interactive services.

Sie claims the cable industry can make this switch for \$100 per household, compared with estimates of \$1,200 per household for curbside fiber telephone service. Telephone companies won't be able to make money with fiber in the loop, according to Sie, unless they enter the video market -- unfairly competing with cable companies, which don't have the cushion of regulated rates to guarantee a profit.

"We don't see any economic justification for retrofit" of the local telephone loop with fiber, Sie said. "So we want to see a business plan (from the telephone companies) that shows how they will get a return" without unreasonable rate increases.

CAPTION:  
Photo

PHOTO: GTE Corp.

SHOWING IT OFF -- A GTE employee demonstrates a two-way videophone. GTE is testing fiber-in-the-loop phone service in Cerritos, in Orange County.

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DESCRIPTORS: TELECOMMUNICATION; FUTURE; TELEPHONE; COMPANY; ADVERTISING

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06287031

**BRAVE NEW TOYS IS ART HEAD WIZARDS MAP THE FUTURE OF FUN**

San Jose Mercury News (SJ) - Sunday, October 13, 1991

By: MIKE LANGBERG, Mercury News Staff Writer

Edition: Morning Final Section: Business Page: 1E

Word Count: 1,724

TEXT:

Los Angeles - FAST FORWARD to 1999.

You've just returned from the local electronics store with a "magic box," a home entertainment system as different from today's smart remote controls as a supercomputer is from a pocket calculator.

After wiring the \$500 gadget to your television, stereo speakers, cable TV and telephone, you are connected to a host of services that make you the master of your own information age.

The box will select your TV viewing, scanning 1,000 channels delivered by fiber optics for the type of programs you like; put you into "virtual reality" video games; offer movies on demand with CD-quality sound; display merchandise and take your order at the touch of a button; transfer money from your checking account to pay monthly bills; activate and display the image from a video camera at your front door whenever someone rings the bell; and connect you to data bases around the world to help with the kids' homework or a business project.

This gadget -- you might call it the Holy Grail of Silicon -- is only a vision today. Nonetheless, it is inspiring computer companies such as IBM, Apple Computer Inc. and Intel Corp. that want to supplement shrinking demand in the business world with multimedia entertainment hardware.

The vision is also inspiring thousands of entrepreneurs, engineers and marketers in a race to find a competitive edge in what one executive predicted will blossom into a new \$14 billion industry in 21st-century home electronics. About 250 of the most dedicated crusaders gathered last week for "InterTainment '91," a three-day conference on the future of an emerging field known as interactive entertainment.

Like true believers in any cause, the conference crusaders spent hours rhapsodizing about the promised land. But they also argued and sniped at each other about how to get there.

Interactive entertainment is a big business, with about \$2 billion spent last year, mostly on arcade, computer and home video games.

Trip Hawkins, chairman and founder of Electronic Arts in San Mateo, which designs computer games, proclaimed in his keynote speech that the market has a potential to reach \$14 billion annually -- based on the assumption that spending on home electronics eventually will parallel spending for renting movies on videocassette.

"We have an opportunity to change the way people live," Hawkins said.

But consumers aren't always eager to embrace someone else's idea of how they should spend their time, and there are several barriers the interactive entertainment industry must overcome before it will achieve Hawkins' prediction. Among them:

(check) Lack of a proven market. Nintendo demonstrated that pre-teen boys will do almost anything to play action-adventure video games, including bugging their parents to the point where one in every three homes in the United States now has a Nintendo game deck.

But no one has yet devised a computer game or similar form of interactive electronic entertainment that appeals to a broad range of adult consumers.

"The people we are trying to attract have never played a video game

before and probably don't want to," said Rob Fulop of Interactive Productions in Foster City, which is about to introduce computer-based games aimed at adults.

(check) Lack of standards. According to Hawkins of Electronic Arts, 15 companies are offering or are about to offer interactive systems based on compact laser discs, called CD-ROM. Consumers will be baffled by the huge selection, Hawkins said, and will be reluctant to buy anything out of fear they will purchase equipment that will soon be obsolete.

(check) Lack of technology. Despite the strides in building smaller, cheaper and faster computers as well as greatly increasing storage capacity of CD-ROM, the magic box is still out of reach.

For example, microprocessors aren't yet powerful enough to generate live-action video images that would lure adults. Teen-agers are drawn to computer games with stick-figure animation, but many computer game developers don't expect to reach the mass market without lifelike characters.

Yet not all the talk at InterTainment '91 was musing about this difficult, far-off future. Bits and pieces of the magic box are reaching the market. Four product categories stood out at last week's meeting:

#### INTERACTIVE CD

After almost a decade of hype and unmet promises, consumers will get a chance this Christmas to buy a new form of entertainment called interactive CD.

Interactive CD players, which look something like videocassette recorders and hook to a television set, run on CD-ROM, short for compact disc-read-only memory. CD-ROM discs look like audio CDs but instead store a combination of computer programs, data, visual images and sound. Using a hand-held remote control, for example, viewers can call up any encyclopedia entry instantaneously, search for entries under any keyword or switch between text and illustrations.

Commodore International Ltd. of West Chester, Pa., introduced the first CD-ROM player in May, called CDTV. Philips, the European electronics conglomerate, will introduce its system, called CD-I, at a news conference in New York on Wednesday.

The attraction of CDTV and CD-I is the immense storage capacity of a CD-ROM, equal to about 500 floppy disks. An entire 26-volume encyclopedia with text, illustration and even a few snippets of speeches and music fits on a single CD-ROM.

But almost no one outside of Commodore or Philips expects the new products to make much of a dent in the market.

The problem is cost and software. CDTV is selling for \$795; Philips appears already to be backing away from a decision this summer to price CD-I at \$1,400 and is aiming for about \$1,000.

Consumers aren't ready to spend that much money for a new technology they don't fully understand, according to several market researchers who spoke at InterTainment '91. They also question whether an encyclopedia will hold viewers' attention for very long and think both the Commodore and Philips systems lack any drawing power.

"I think these guys have a terrible problem," said Robert Alexander of Alexander & Associates, a New York research firm that organized InterTainment '91. "There's no software out there."

Alexander predicted Commodore and Philips will sell from 30,000 to 40,000 CD-ROM players this year, "a drop in the bucket" compared with established categories of consumer electronics such as VCRs and video-game decks.

Although demand for interactive CD will develop eventually, hardware and software are likely to soon evolve beyond this year's debut products -- making it unlikely the two companies will turn a profit on their investment any time soon, Alexander said.

#### CD-ROM VIDEO GAMES

Grown-ups may not flock to CDTV and CD-I, but their children are about to get pitched another use of CD-ROM -- as an attachment for popular video-game systems such as Nintendo, Sega and NEC TurbografX.

NEC sells a \$299 CD-ROM player that ties into its game system, using the disc's storage capacity to offer more sophisticated graphics that include brief interludes of digitized live video. Sega will introduce a CD-ROM for its Genesis system next month in Japan for the equivalent of \$340 and plans to reach the U.S. market next summer.

Nintendo has made vague references to CD-ROM and is expected to enter the market by early 1993.

#### VIRTUAL REALITY

Robert Greenberg, a manager in Texas Instruments Inc.'s consumer products division, surprised the audience at InterTainment '91 by announcing a home virtual reality system that TI will offer at Christmas '93 for only \$299.

Although unwilling to discuss any details, Greenberg said the system would use "revolutionary" display technology to project a high-quality graphic image in a lightweight helmet. The system would be driven by game cartridges costing \$50 to \$60.

TI plans to sell 3 million of the unnamed product, enough to create a market well in excess of \$1 billion for hardware and game cartridges combined.

"Virtual reality is finally starting to leave the hands of philosophers and enter the hands of engineers and marketers," said Christopher Gentile of Abrams/Gentile Entertainment Inc., a toy design firm in New York.

Virtual reality is loosely defined as putting game players into a computer-generated environment, rather than merely reacting to images on a display screen. Full "immersion" virtual reality can include a helmet that senses head movement and changes the view seen through small TV screens mounted in front of each eye, along with gloves that allow adventurers to touch objects in the virtual world.

At the Battletech game center in Chicago, visitors already can enter a world created by computers.

Eight players climb into vehicle simulators and play against each other on a futuristic computer-controlled battlefield. About 150,000 customers have experienced Battletech, at \$7 for a 10-minute ride, since the center opened in August 1990. The company behind Battletech, Virtual World Entertainments Inc., will start opening locations nationwide under the Virtual World name, with re-programmable simulators that can be used for a variety of games.

#### SMART TV

On the average, U.S. households turn on the TV for about seven hours a day. But it's a one-way street: The TV talks, we listen.

That could change in 1992. Several companies at InterTainment '91 described equipment that will allow viewers to get involved with the action on TV.

Interactive Systems Inc. of Beaverton, Ore., is launching its VEIL system that reads specially encoded signals included in a TV broadcast. The VEIL terminal, which costs about \$100 with a \$10 monthly fee, connects to the TV and telephone, allowing viewers to participate in game shows, enter

contests and order merchandise. The VEIL terminal also has a small printer that can produce coupons at the touch of a remote-control button whenever the viewer sees an ad for an appealing product.

TV Answer Inc. of Reston, Va., is pursuing a similar but more ambitious proposal that wouldn't tie up the family phone. TV Answer's box, expected to cost \$200 to \$300, would communicate through a radio network similar to a cellular telephone system.

The Federal Communications Commission is now considering whether to award a small slice of the radio spectrum to TV Answer. If the approval process stays on schedule, the company expects to sign up its first customers next summer.

CAPTION:

Photo

PHOTO: NEC TurboChip's 'Dark Wing Duck' offers more sophisticated graphics than earlier video games. (color)

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DESCRIPTORS: ELECTRONICS; EQUIPMENT; TECHNOLOGY; COMPUTER; COMPANY; VIDEO; TELEVISION; MUSIC; GAME; ENTERTAINMENT; CONSUMER

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**THE COMICS ARE LOSING FANTASY AND GETTING REAL**

San Jose Mercury News (SJ) - Sunday May 26, 1991

By: TANYA ISCH CAYLOR, Knight Ridder News Service

Edition: Morning Final Section: Living Page: 1L

Word Count: 810

MEMO:

Cover Story

TEXT:

FORT WAYNE, Ind. - We should have seen it coming.

Ted had been nagging Sal for days to lighten her workload. We knew what he was talking about.

Nonetheless, when we turned to the April 17 comics page and read yuppie superwoman Sally Forth's weary response:

"Are we talking about lovemaking here, Ted?"

We couldn't help feeling a little embarrassed.

Sex? In the funny papers? We were used to seeing grizzled old perverts leer at scantily clad women in "Beetle Bailey." But this was something different.

Never mind that Ted and Sal never got out of the kitchen. We knew things would never be the same.

And they weren't.

Less than a week later, in "For Better or Worse," John drank from a cup of milk that he discovered had been pumped from his nursing wife's breast. And then Luann (a strip based on a neurotic 13-year-old) began to menstruate.

The timing was purely coincidental, say the cartoonists who draw the strips. But all three incidents are examples of a movement toward realism

on the comics pages.

"It's a trend, not only in the subject matter of the strips but in the type of strips that newspapers are buying," says Jay Kennedy, comics editor of King Features, which distributes "Sally Forth" and "Luann."

"You're going to be seeing fewer funny animals, fewer Peter Pan-type strips, less fantasy and more reality. People want to see more characters that they can relate to."

Greg Howard, the Minneapolis-based cartoonist who draws "Sally Forth," says it seemed natural for his characters to bemoan their lack of time together.

"The situation is one that married couples with children face, particularly if they are both working," he said in a recent phone interview. "I guess I did have to think about it a little bit. But I wasn't trying to stir up any trouble."

And he didn't, as far as he knows. He hasn't received any letters on the topic thus far.

The people who produce the nation's comics pages hope this is a sign that the Church Lady-like standards they've been held to for decades are relaxing a bit.

"For years, the comics have been perceived as a medium for children, which they are not, especially in dailies," complains Kennedy. "Only the Sunday comics page truly has many readers who are children."

Garry Trudeau's "Doonesbury," which has dealt with AIDS and other adult themes in recent years, has helped to chip away at that stereotype. So has "The Simpsons," the silly but **smart TV** cartoon that appeals to both adults and children.

But there are some subjects that both adults and children ought to be more open about, says Lynn Johnston, creator of the strip "For Better or Worse."

"The trouble right now is that everybody talks about bodily functions and sex in an ugly, nasty, dirty way," Johnston said in a phone interview from her home in North Bay, northern Ontario.

Unlike strips such as "Dennis the Menace," where the characters never age, Johnston has let her characters simply live their lives in the 12 years she's drawn the strip. So when Ellie gave birth a few weeks back, it seemed natural that she'd breast-feed the new baby.

"It's a very discreet, very warm, very pleasant thing you see happening all the time," she says. "I nursed both my children and I really enjoyed it, but I thought there were some funny aspects of it, too."

The misidentified cup of milk, for example. Or the upcoming strip in which Ellie realizes she's developed lopsided breasts from nursing on one side. And then there's the problem every nursing mother dreads: accidental leakage.

Johnston remembers wearing a red silk dress to a dance, only to have her front soaked after someone mentioned the word "baby." She still hasn't decided whether she'll use a similar scenario in the strip, though. "If it's appropriate. If it works in. If it's funny."

When Greg Evans, creator of "Luann," was considering his menstruation series some months back, he sent copies to Johnston.

He wanted her feedback. And he was wondering whether Johnston would address the issue with Elizabeth, her version of the neurotic 13-year-old.

"I thought he handled it very well," she says. "But as far as Elizabeth,

I don't know. The characters sort of write the strip themselves."

To tell the truth, Johnston is leery of having her two teen-age characters, Elizabeth and Michael, do anything that might embarrass her own teen-age daughter and son.

"My son would be horrified if I showed Michael talking to a girl about sex," she says.

And she has enough trouble talking to her daughter about the facts of life as it is. So Johnston leaves informational books lying around and checks periodically to see if they've been moved.

It's a sad scenario, she admits.

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DESCRIPTORS: HUMOR; ARTS; LIFESTYLE; IMAGE; CHANGE

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**U.S. TUNES ITSELF OUT OF TECHNOLOGICAL EVOLUTION LOSING MARKETS, IT'S TOUGH TO CATCH UP**

SAN JOSE MERCURY NEWS (SJ) - Sunday, July 29, 1990

By: RICHARD J. ELKUS JR.

Edition: Morning Final Section: Editorial Page: 7C

Word Count: 1,340

**MEMO:**

Richard J. Elkus Jr. is chairman and CEO of Prometrix Corp. of Santa Clara. He formerly worked with Ampex Corp., developing the VCR. He is chairman of the National Science Foundation panel on high-definition television and is a co-chairman of the American Electronics Association committee on HDTV. He wrote this article for the Mercury News.

**TEXT:**

DURING the 1940s and 1950s three U.S. companies created industries that became the foundation for many of the strategic world markets of today. RCA was instrumental in the development of television. Shockley Transistor Co. spawned the semiconductor industry. Ampex Corp. developed magnetic recording.

Today, television, telecommunications, computers, consumer electronics and mass media owe much to these three companies.

As of 1970, America was virtually self-sufficient. It encompassed the world's biggest market, produced more products and had the largest trade surplus of any nation. America's currency was among the most solid in the world; America's banks were the biggest.

Today, only one U.S.-owned company (not RCA) produces television sets. The television market is dominated by Japan and Europe. Today the United States is virtually a non-participant in the market for audio and video recording.

Today the United States is no longer the largest producer or clear technological leader in semiconductor design and manufacture. The U.S. surplus balance of trade in computers is less than half of what it was in 1981. And America has a negative balance of trade in computers and related products with Japan.

In a spring 1990 report on 12 emerging technologies, the Department of Commerce's Technology Administration noted that in comparison with Japan, the United States was:

(check) Losing badly in advanced materials, biotechnology, digital

imaging technology and supercomputers.

(check) Losing in advanced semiconductor devices, high-density data storage, high-performance computing, medical devices and diagnostics, optoelectronics and sensor technology.

(check) Holding its own in artificial intelligence and flexible computer-integrated manufacturing.

(check) Gaining in none.

The change in balance of economic power between the United States and Japan over the last 45 years has been staggering. As R. Taggart Murphy wrote in the March/April issue of the Harvard Business Review, "Japan today sits on the largest cache of wealth ever assembled."

(hbox)

Why a change of this magnitude in such a short time?

Imagine that products and markets are like links in a chain. If you take a product and carry its development to a logical extreme, it becomes related to other products. For example, the optical system on a 35mm camera is similar to the optical system on a video recorder.

Conversely, the electronic imaging system that is common to a video recorder is now beginning to be substituted for film in a camera.

Similarly, if you develop a market to its logical extreme, it becomes related to other markets. For example, the development of the market for videocassette recorders made possible the market for prerecorded videotape which is now a larger market than that of film in theaters.

Conversely, if manufacturers of prerecorded videotape choose one VCR format over another for their programming, that choice tends to influence the popularity and growth of the market for VCRs. Thus products and markets become interrelated and interdependent as they are developed.

(hbox)

In the electronics market there is one component common to virtually all electronics products -- the semiconductor. Control enough links in the chain such as the markets for video recording, cameras, audio recorders, television and computer products, and you become predominant in semiconductors. Become predominant in the design and development of semiconductors, and your prowess as a developer of other electronic products and markets increases substantially.

Electronic products are fundamental to virtually every market there is. Thus, a chain of markets linked together begins to control a technological base of such significance that competitive re-entry is very difficult and expensive.

One often hears how we must improve our technological base. Technology follows markets, not the other way around. If you own the technology, but lose the market, you will lose the technology.

Ampex introduced the video tape recorder in 1956 and the VCR in 1970. As a company it had a virtual 100 percent hold on patents in the field. Ampex decided not to pursue the VCR market. That market was picked up by the Japanese. With that market went not only the majority of video recording but also a major segment of the support technologies including the design and manufacture of semiconductors.

The development of high-definition products (for example, HDTV) by the Japanese represents a major improvement in the processing of large amounts of audio-visual information. High-definition products will touch virtually



every aspect of human creativity.

For example, high-definition television doubles the horizontal and vertical resolution of television providing five times the visual information and as a result, spectacular pictures and sound. These advancements are made possible in part by major improvements in computer display and semiconductor technology.

Because of the breadth of applications and cost of development, no industry, technology or company will be able by itself to meet the challenge and opportunities of high-definition products and systems. As the compact disc redefined the music industry, high-definition products will redefine mass media.

With major advances in digital technology, high-definition products will redefine computers and their application. With alternate means of transmission, high-definition products will redefine the broadcast industry, shopping, medical electronics, education and banking.

As Japan introduces a full line of high-definition products, it ensures itself of major advancements in: cameras and recorders, fiber optics and satellite transmission systems, VCRs, computers, flat screen displays and semiconductors --all markets in which it has a major if not commanding position.

The infrastructure in electronic products and systems will ultimately become one with that of the media and telecommunications services as the ability to process massive amounts of audio-visual information increases. This is part of the reason for Sony's purchase of CBS Records and Columbia Pictures.

(hbox)

As the Japanese position in strategic, interrelated end-use markets has improved, the cost of competitive re-entry by others becomes prohibitive. This, in large part, has occurred because of the interrelated nature between products and markets. Today individual products and markets are really a combination of many interrelated technologies, components, products and markets.

For example, the technology of putting pictures on tape was of supreme importance 20 years ago. Now competing in the video recording market requires high levels of sophistication in: digital signal processing; display technology; camera and optical know-how; semiconductor technology; computer technology; high-volume, fully automated manufacturing capability; and mass marketing, sales and distribution.

Other costs also rise. For example, the development of a semiconductor device that cost a few million dollars a few years ago may cost in excess of \$1 billion today.

Hence, while the United States may be willing to drop a product or market on the basis of "opportunity cost" and reinvest in a more lucrative enterprise, Japan will often do just the opposite. Because of the concept of relationships between products and markets, the Japanese feel that to abandon a product or market means the potential loss of other related products and markets, and therefore, the loss of valuable infrastructure.

It is this infrastructure -- that is, strategically related end-use products and markets -- that provides the basis for future economic growth and development.

Assuming that the combination of the markets for electronics, telecommunications and media is the basis for entry into the information age and recognizing that high-definition products and systems are fundamental to the confluence of these three market areas, the following conclusion should be considered:

Any significant loss of infrastructure of end-use products and markets in electronics, telecommunications and media may substantially reduce the growth potential of an economy dependent upon that infrastructure.

Can the United States turn the tide in its favor? Absolutely. The U.S. computer industry is still dominant. America's position in mass media, software and transmission services is still solid. These markets can provide a basis for restoring America's competitive position.

But such an effort must also include strategic moves back into consumer electronics, display systems, audio and **video recording**, **computer peripherals**, components, and related technologies. Otherwise, the combination of developments in high-definition products and those markets America has lost will continue to encroach on remaining U.S. positions of strength.

CAPTION:

Drawing

DRAWING: Charles Waltmire -- Mercury News

(Drawing of Uncle Sam holding an old television and a man pointing to a bigger, newer and higher definition television)

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DESCRIPTORS: US; JAPAN; TELEVISION; ELECTRONICS; TECHNOLOGY; RESEARCH;  
POLICY; MONEY

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**TECHNICAL TIPS DREAM OF FULLY AUTOMATED HOME IS HERE**

SAN JOSE MERCURY NEWS (SJ) - Friday, May 15, 1987

By: JONATHAN TAKIEFF, Knight-Ridder News Service

Edition: Morning Final Section: Weekend Page: 9D

Word Count: 415

TEXT:

HAVE you ever wished you could call home and ask your VCR to tape a TV show?

Or maybe you have wished you could command the house air conditioner by remote to go into overdrive 'cause you're bringing home a gang from the office.

This dream of the fully automated home -- including a computer and telephone-controlled audio/video system, microwave oven, burglar alarm, lights, heating system and even a plant-watering apparatus -- already has been realized in Japan by Mitsubishi.

Now the fantasy will come true in the United States.

Making it all possible, the Washington, D.C.-based Electronic Industries Association has decided on a U.S. standard for data exchange between appliances -- selecting the GE Homenet Powerline System.

This is a pragmatic choice, because GE is not just a full-line manufacturer of appliances, but also the leading supplier of 'white goods' (ovens, refrigerators, washers/ dryers) to the new-home building industry.

GE's Homenet is a fine-tuning of the BSR-developed lamp-and-appliance control system now marketed also by X-10, Leviton and Radio Shack.

In their current state of evolution, the systems use special receiver modules that plug into wall outlets and in turn control the power to a plugged-in appliance or lamp.

The modules take their instructions from either a stand-alone central base station, a "smart" TV (in one GE case) or a home computer (an option with X-10 gear).

The beauty of the system is that information is sent through the regular house wiring. The Mitsubishi smart home system, by contrast, requires separate wiring.

Now that an easy communications standard has been established, manufacturers will begin building a control receiving circuit (called a "bus") into major appliances. This will cut down on component clutter and make it possible for pieces of equipment to "talk" to each other.

And it will make it possible for you to "dial M for movie taping" or "dial C for casserole cooking" -- from anywhere on Earth.

(box)

With the cost of a good-quality personal portable copier now dipping below \$500, many people are tempted to buy one for the home office. Now Matsushita has an added incentive: Newly introduced in Japan, its FN-P300 personal copier also can make hard-copy prints of images from TV, VCRs or videodiscs.

A chip inside the printer grabs and stores a single video image on request -- say a cute shot of your kid from a home video, or a mail-order address flashing on the screen in a commercial -- until you want to print it.

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DESCRIPTORS: HOUSING; TECHNOLOGY; PRODUCT; QA; VIDEO; AVIATION; SAFETY

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03523364

**ARNE SULTAN, TV PRODUCER, WRITER**

SAN JOSE MERCURY NEWS (SJ) - Thursday, March 20, 1986

By: United Press International

Edition: Stock Final Section: Local Page: 11B

Word Count: 114

TEXT:

Los Angeles - Arne Sultan, the Emmy award-winning executive producer of the popular "Get Smart" TV series, is dead, a spokesman said.

Sultan died Monday of cancer at his Studio City home. He was 60.

Sultan had worked in the entertainment industry as a comedian, writer and producer. His credits and co-credits included "The Governor and J.J.," which he helped create, "He and She," "Barney Miller," "The Sandy Duncan Show" and "The Partners."

With longtime writing partner Marvin Worth, Sultan wrote such feature films as "Boys' Night Out," "Three on a Couch" and "Promise Her Anything." Sultan and Worth grew up together in Brooklyn.

"Get Smart" won the Emmy as outstanding comedy series for the 1968-69 television season.

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DESCRIPTORS: OBITUARY